Entomological Series Vol. X, Nos. 1, 2

Memoirs of the Department of Agriculture in India

1. Four New Indian Gall Midges

BY

E. P. FELT, D.Sc.

State Entomologist, New York

2. The Citrus Psylla (Diaphorina citri, Kuw.) [Psyllidae: Homoptera]

BY

MOHAMMAD AFZAL HUSAIN, M.Sc., M.A.

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AND

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AGRICULTURAL RESEARCH INSTITUTE, PUSA

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FOUR NEW INDIAN GALL MIDGES.

BY

E. P. FELT, D.Sc.,
State Entomologist of New York.

(Received for publication on 9th August 1926.)

The descriptions of the following interesting specimens are based upon a small collection of gall midges received from Rao Sahib Y. Ramachandra Rao, Acting Government Entomologist of Coimbatore, South India, under date of 17 March 1926. These rearings add materially to our knowledge of the biology of Indian species.

DASYNEURA MANGIFERAE, n. sp.

A series of midges was reared from galls in mango flowers and labelled Coimbatore, South India, 8 February 1924, Y. R. Rao Coll. The species presents marked peculiarities for the genus and, since nothing of the kind has been reared from mango and comparatively few species of this genus characterized from India, it is described below.

Female: Length 1·25 mm. Antennæ extending to the base of the abdomen, sparsely haired, dark brown, 14 segments, the fifth cylindrical, with a length $\frac{3}{4}$ greater than its diameter, the terminal segment slightly produced, with a length about twice its diameter, broadly rounded apically; palpi, first segment subquadrate, the second slender, with a length 4 times its diameter, the third $\frac{1}{2}$ longer than the second, somewhat more dilated, the fourth as long as the third; mesonotum dark reddish-brown, scutellum pale yellowish, postscutellum yellowish-brown; abdomen dark yellowish-brown; wings hyaline, subcosta uniting with the margin at the basal half, the third vein well before the apex, the fifth joining the posterior margin at the distal fourth, its branch at the basal half; halteres pale yellowish; legs mostly pale straw, the distal tarsal segments darker, the pulvilli as long as the well developed unidentate claws; ovipositor yellowish, as long as the body, the basal segment, probably the ninth, with a quadrate, median, chitinous plate, with broad, tooth-like, sublateral processes posteriorly, terminal lobes narrowly triangular, with a length about twice the major width, thickly clothed apically with short, stout setæ.

Type A 3452, N. Y. State Museum.

SCHIZOBREMIA MALABARENSIS, n. sp.

A series of midges was reared from a mealy bug, *Pseudococcus virgatus*, and labelled: On pepper, Taliparamba, N. Malabar, 15 November 1924. A. G. R. Coll.

The species is apparently related to the Formosan *S. formosana*, Felt, and is tentatively referred to the same genus.

Male: Length 1·25 mm. Antennæ about ¾ the length of the body, rather thickly haired, fuscous yellowish, probably 14 segments, the fifth with stems ¼ and 1¼ the length of their diameters respectively, the basal enlargement subglobose with a subbasal whorl of rather long stout setæ and a subapical circumfilum, the distal enlargement broadly pyriform, with a length ¼ greater than its diameter, subbasal and subapical circumfila, the loops moderately numerous and long and near the middle a moderately thick whorl of long stout setæ; terminal segment missing. Palpi, first segment with a length about 3 times its width, the second short, with a length about equal to its diameter, the third fusiform, with a length 4 times its diameter; mesonotum a variable fuscous yellowish, scutellum and postscutellum yellowish, abdomen fuscous yellowish; wings hyaline, subcosta uniting with the margin at the basal third, the third vein at the apex of the wing, the fifth joining the posterior margin at the distal fourth, its branch at the basal third; halteres whitish fuscous basally; legs mostly pale straw, the pulvilli as long as the well developed, strongly curved claws, the latter unidentate on the anterior and mid tarsi. Genitalia, basal clasp segment moderately long, stout, terminal clasp segment rather short, slightly curved and tapering, dorsal plate deeply and triangularly emarginate, the lobes tapering to an irregularly rounded apex; ventral plate long, broad, broadly rounded apically.

Female: Length 1·25 mm. Antennæ extending to the base of the abdomen, sparsely haired, 14 segments, the fifth with a stem about ¼ the length of the cylindrical basal enlargement, the latter with a length about ¼ greater than its diameter and with thick whorls of rather long stout setæ basally and apically, terminal segment somewhat produced, with a length nearly 3 times its diameter, narrowly and irregularly rounded apically. Palpi, first segment short, subquadrate, the second with a length over twice its diameter, the third a little longer and more slender than the second; ovipositor short, the terminal lobes narrowly oval, with a length about twice the width and sparsely haired. Other characters practically as in the male.

Type Cecid. A 3451, N. Y. State Museum.

LOPESIELLA POLLINIAE, n. sp.

The one female was reared from shoot galls in *Pollinia argentea*, a grass collected at Taliparamba, Malabar, South India, September 1925, Y. R. Rao collector. The reference to this African genus is tentative. Later studies may demonstrate the necessity of erecting a new genus for this species, though this may well be deferred until males are available for study.

Female: Length 3·5 mm. Antennæ ¾ the length of the body, rather thickly haired, yellowish-brown, 14 segments, the fifth with a stem ½ the length of the sub-

cylindrical basal enlargement, the latter with a length fully 3 times its diameter, a distinct constriction near the basal third, rather thick whorls of long setæ subbasally and subapically, circumfilar loops only moderately developed. Palpi, first segment short, quadrate, the second slender, with a length 4 times its diameter, the third greatly prolonged, rather slender, with a length 10 times its diameter ; mesonotum a variable purplish-brown, the posterior median area and the scutellum yellowish, postscutellum darker, abdomen reddish, sparsely haired; the wings with a distinct yellowish cast, the third vein uniting with the margin well beyond the apex ; halteres yellowish-orange; coxæ reddish, legs mostly dark straw, claws long, slender, strongly curved, the pulvilli rudimentary; ovipositor short, stout, the dorsal processes slender, finger-like, with a length 4 times the diameter, the terminal lobes narrowly triangular and sparsely setose.

Exuviae : Length 4 mm. Mostly whitish, the antennal cases extending to the base of the abdomen, the wing cases to the second abdominal segment and the leg cases to the fifth abdominal segment; basal antennal processes conical, chitinized, fuscous apically and with a secondary smaller tooth mesially and basally, the dorsum of the abdominal segments slightly chitinized, yellowish and with irregular transverse rows of subconica' processes, these latter being larger on the median posterior line ; terminal segment irregularly rounded.

Type Cecid. A 3455, N. Y. State Museum.

CECIDOMYIA MALABARENSIS, n. sp.

One brightly marked, good-sized midge suggestive of *Lestodiplosis*, Kieff., were it not for the simple claws, was labelled: From pepper berries, 20 October 1925, Taliparamba, N. Malabar, A. G. R. Coll. This insect presumably belongs in the Trifili and owing to practical difficulties in making a definite generic assignment, it is described as new under this very general generic designation, since the striking characters make it relatively easy to establish the identity of the insect later. It is probably an inquiline or predaceous, rather than a true gall producer.

Female : Length 3 mm. Antennæ nearly as long as the body, thickly haired, dark brown, 14 segments, the fifth with a stem ⅓ the length of the subcylindrical basal enlargement, the latter with a length about 2½ times its diameter, distinctly constricted near the middle and with thick whorls of long stout setæ basally and apically ; terminal segment produced, the basal portion cylindrical, with a length 4 times its diameter, the distal part a slender, finger-like process, with a length fully 5 times its diameter. Palpi, first segment short, sub-quadrate, the second slender with a length 4 times its diameter, the third as long as the second, rather slender, the fourth a little longer than the third, somewhat dilated ; mesonotum dark brown, scutellum pale yellowish, postscutellum yellowish-brown; abdomen dark brown, yellowish apically, rather thickly haired; wings subhyaline, fuscous, with a broad, irregular, yellowish band near the distal third, a yellowish area on the basal third of

costa and an indeterminate yellowish or paler area at the distal fourth and also at the apex of the wing: subcosta uniting with the margin near the basal third, the third vein well beyond the apex, the fifth obsolescent distally; halteres pale yellowish orange; coxæ mostly yellowish-orange, femora dark brown, the anterior narrowly annulate with yellowish apically, the mid and posterior broadly yellowish near the middle and narrowly so apically: tibiæ dark brown, the anterior narrowly annulate with yellowish basally, broadly so near the basal third, the mid tibiæ narrowly annulate with yellowish basally, the posterior tibiæ broadly annulate with yellowish basally and at the distal third, anterior and mid tarsi dark brown, the second segment broadly annulate with fuscous yellowish near the middle, the third and fourth broadly annulate with yellowish basally, the fifth yellowish, the posterior tarsi with the first segment fuscous, the second yellowish with its distal third fuscous, the third and fourth yellowish with the distal half dark brown, the latter somewhat lighter, the fifth yellowish, claws fuscous, rather strongly curved, unidentate, the pulvilli rudimentary: ovipositor short, the terminal lobes broadly, irregularly triangular and with a long dorsal seta near the middle, a group of setæ apically and on the ventral margin near the middle a somewhat diffuse group of smaller setæ.

Type Cecid A 3453, N. Y. State Museum.

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The Citrus Psylla (*Diaphorina citri*, Kuw.) [Psyllidae: Homoptera]

BY

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CECIDOMYIADAE.

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HEMIPTERA (RHYNCHOTA).

MIRIDAE (CAPSIDAE).

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Memoirs of the Department of Agriculture in India

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PREFACE

The author has been paying some attention to the Parasitic Hymenoptera of South India both from the systematic and bionomic points of view, and has published a few notes and sundry papers on the subject within the past few years. This paper is, however, intended to be the first part of the results of the author's studies on the wasps of the Family Braconidæ noted so far from Southern India, and deals with the Subfamily *Vipioninæ* (old name *Braconinæ*) It is hoped that it may be possible to issue notes on the other sub-divisions of the family in due course. This publication does not presume to be a complete account of all the representatives of the group known to inhabit Southern India, since several new forms are sure to be discovered for many more years, from the different corners of this practically unworked area. It is only an attempt designed to provide a working basis for the specialist of the future on this group, since this is practically the first attempt in this direction in India. As such, it is hoped that the paper with all its shortcomings may be of some use to students of this group in India and perhaps also to Economic Entomologists interested in the biological control of Insect Pests.

AGRICULTURAL COLLEGE,
Coimbatore, 28th September 1926.

T. V. RAMAKRISHNA AYYAR.

A CONTRIBUTION TO OUR KNOWLEDGE OF SOUTH INDIAN BRACONIDAE.

PART I—VIPIONINAE.

BY

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Lecturer in Entomology, Agricultural College, Coimbatore

(Received for publication on 1st November 1926.)

Introduction.

The increasing interest evinced by many Economic Entomologists at the present time on what is known as the biological method of pest control has contributed not a little to stimulate the study of Parasitic Insects, and especially of the Parasitic Hymenoptera—a group of insects, which, more than any others, includes numerous forms which play their remarkable rôle as natural enemies of many injurious insects all over the world. Until about a decade or two ago, the study of these interesting insects was carried on by Entomologists more from the aspects of Insect Taxonomy and Distribution than from a Bionomical or Economic point of view. The Catalogues and Memoirs of such distinguished Entomologists as Förster, Marshall, Thomson, Dalla Torre, Ashmead, Szepligeti, etc., are well-known examples of such productions. It is unnecessary to add, however, that such classical works on Systematic Entomology by well-known pioneers in the field will always maintain their usefulness as valuable works of reference and continue to be the essential foundations on which all work on economic or applied Entomology can be correctly and safely built, since the systematist is admittedl the forerunner of all workers on the applied aspect of Entomology.

The study of these parasitic insects has, nowadays, taken an additional turn and attention is now being directed wherever possible to the investigation of the bionomical aspects of these forms—particularly to their host relations and habits which might possess some economic importance. With this latter aspect prominently in view, an attempt is made in this paper to give a systematic account of the species of the wasp Family Braconidæ so far noted from Southern India with whatever notes and observations we possess on their different biological aspects. The paper is necessarily a preliminary one, since hardly any work of this nature has been attempted in India hitherto, and as such it cannot but be imperfect since new forms are turning up frequently, and are sure to be found in numbers in a

rich but little explored tract; however, it is hoped that, with all its inevitable shortcomings, this paper may serve as a beginning in this line of work in this country and contribute its own small share in adding to our knowledge of these extremely interesting and useful insects.

Braconidae.

Position, Distinguishing features and Classification. A few remarks on the position and general features of this family of parasites may be added before we come to the treatment of the different species. This group of Parasitic Hymenoptera forms one of the most important families included under the super-family Ichneumonoidea erected by Ashmead.[1] In the words of this eminent Entomologist, this big "group, taken as a whole, is of the greatest economic importance, since the vast majority of species composing it are beneficial to man. No other group of insects has a more important rôle in the economy of nature. It is unquestionably the largest and most extensive complex in the Hymenoptera, with possibly the exception of the *Chalcidoidea*, and is composed of a vast number of minor groups representing hundreds of genera and many thousand species. Unlike some species, in others of these great complexes, all, without a single exception, are genuine parasites and destroy or devour the eggs, larvæ, pupæ or imagoes of other insects; scarcely a single order of insects is free from their attacks, and even relatives in their own order and family are devoured by them."[2] The other important families allied to the Braconidæ and included in this super-family are the Ichneumonidæ and the Evaniadæ. The relations and differences between these families of the group may be indicated as below.

A. Abdomen petiolated and attached to the dorsal region of the metathorax; costal and sub-costal veins in the forewing separate with a distinct costal cell between them . . . . . . **Evaniadæ.** (Plate VI, fig. 1.)

B. Abdomen attached normally to metathorax between bases of hind legs, costal and sub-costal veins confluent and costal cell therefore absent –

(*a*) Front wings with two recurrent nervures . . . . **Ichneumonidæ.** (Plate VI, fig. 2.)

(*b*) Front wings with only one recurrent nervure . . . . **Braconidæ.** (Plate VI, fig. 3.)

In their general form and habits, the Ichneumonidæ and Braconidæ are very similar and closely related, but the forms of the two families can be easily separated by the marked differences in wing venation, the most important of which is the presence of two recurrent nervures in the Ichneumonidæ and only one or none in the Braconidæ (see Pl. vii). In addition to this fundamental difference, in the Ichneumonidæ the first cubital and the first discoidal cells are usually found confluent and not distinctly separated from each other as in the Braconidæ. In the abdomen of the majority of Braconids, the first and second abdominal segments are

[1] *Journ. New York Ent. Society*, VII, p. 47, 1899.
[2] *Proc. U. S. Nat. Mus.*, XXIII, p. 4, 1900.

united together and not flexible as in the Inchneumonids. The family Braconidæ has been divided into numerous sub-divisions from the time of the earliest workers such as Förster, Marshall and Haliday. Most of the numerous groups of Förster[1] have been established as subfamilies by Marshall [2] in his monograph on British and European forms, and these come to about thirty in number. Ashmead[3] tabulated seventeen subfamilies, while Szepligeti, whose classification in "Genera Insectorum" (1904) appears to be the latest comprehensive one, includes as many as thirty-one subfamiles. Though the classification of these authors has undergone and is undergoing changes at the hands of modern workers on the group, those specialising in the study of this family will find the tables of subfamilies and genera in the publications of Ashmead and Szepligeti extremely useful.

Economic importance of the Family. From an economic point of view this family is one of the most important, although we know very little about the habits and life-histories of many Indian forms. Some of the genera are very common and effectively control some important pests of cultivated crops. In a recent paper[4] the author has attempted to give some idea of the status of some of the Indian Parasitic Hymenoptera and reference is there made to this family also. Species of *Microbracon* have been noted on the Cotton Bollworms, Brinjal Bud-worm, *Lab-lab* Pod-borer, and other caterpillars. *Apanteles* is another cosmopolitan genus including numerous species, which attack almost all lepidopterous larvæ and often cover the host with clusters of creamy-white silken cocoons (See fig. 3, Pl. viii). *Aphrastobracon*, *Tropobracon Campyloneurus*, *Ipobracon*, *Stenobracon*, *Chelonus*, *Heterogamus*, *Phanerotoma*. *Microplitis*, *Opius*, *Meteorus*, etc., are other Braconid genera, species of which have been noted to parasitize some South Indian crop-pests. In a paper recently sent to the press[5] by the author on the parasites of economic importance from South India are listed some of the Braconids so far noted as economically important. It is needless to add that this aspect of the study of these insects is extremely interesting and fascinating and will in many cases prove of the greatest value to the economic entomologist searching for the natural enemies of some of our serious crop pests.

Previous records from India. It may be seen from the present writer's rough Catalogue [6] of Indian Braconidæ, that over two hundred species of the family have been recorded so far from the Indo-Ceylonese region. In spite of this fairly large number from the whole region, only about twenty species appear to have been recorded from South India. It may also be interesting to note that before the year 1912, excepting a solitary record of two species of *Bracon* by Fabricius from Tranquebar in 1793, there has been no record of even a single Braconid from this tract. All pre-

[1] *Synopsis der Familien und Gattingen der Braconen*, 1862.
[2] *Trans. Entl. Soc.*, from p. 1, 1885.
[3] *Proc. U. S. National Mus.*, XXIII, 1900.
[4] *Bom. Nat. Hist. Soc. Jour.*, p. 437, 1925.
[5] *Bull. Entl. Res.*, XVIII, p. 73, 1927.
[6] *Rept. 5th Entl. Meeting, Pusa*, pp. 353-363, 1923.

vious records were those of species noted in different parts of Northern India and Ceylon; and of all contributions in that direction, those of the late Peter Cameron, the well known hymenopterologist, stand foremost. His records are mostly from Sikkim, Punjab, and the Bombay Presidency. Though his papers include Ceylon forms, the great number of Ceylonese species are found recorded by Motschulsky, Walker, Ashmead and Enderlein. The first recent contribution on South Indian Braconidæ was by Mr. H. L. Viereck, on Some South Indian Braconidæ submitted to him for indentification by the Mysore Agricultural Department in 1912.* Since then, as a result chiefly of the writer's studies on the group, further additions have been made and the records of some of these appear in his recently published papers [1], and some are also included in his preliminary catalogue of 1923. Besides these, Mr. Fletcher recorded a form (*Spinaria leucomelæna*, W) noted from Coorg in 1915, and Prof. Silvestri and Viereck described some fruit fly parasites.

In this present paper, further additions are made, and together with the previous records, an attempt is made to prepare a consolidated account of the Braconidæ noted up to date, and to treat them in a systematic manner, adding wherever possible notes on their bionomics. In all, 33 species are included in this paper on the *Vipioninæ*; of these about two dozen are new to science or first records for South India. But the list is by no means a complete catalogue of the South Indian species of the subfamily, since a good many forms are still unidentified, while many more await discovery. The arrangement adopted here is more or less that of Szepligeti in his *Genera Insectorum* Volume on the Family.

Acknowledgments. In the correct identification of some forms, in the confirmation or correction of some of the author's determinations, and in the shape of material, opinion and criticisms, the author has received substantial help from the Director of the Imperial Bureau of Entomology, London, Mr. S. A. Rohwer of the U. S. National Museum, Prof. C. F. Baker of the University of the Philippines, Mr. G. T. Lyle of Surrey, England, Dr. Biró of Hungary, Mr. H. L. Viereck of the U. S. A., the Imperial Entomologist, Pusa, the Government Entomologist, Punjab, and the Imperial Forest Zoologist, Dehra Dun. To all these gentlemen the writer hereby expresses his sincere gratitude. He also takes this opportunity of thanking the authorities of the Indian Museum and the Pusa Research Institute for readily helping him with the loan of all the available literature on the subject from their libraries, and the Acting Government Entomologist, Coimbatore for kindly allowing all the facilities during the course of this work.

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* *Proc. U. S. National Mus.*, XLII, pp. 139-146, 1912-13

[1] Notes on S. Indian insects *Rept. 4th Entl. Meeting, Pusa*, 1921.
An undescribed natural enemy of the castor semilooper, p. 298.
Bom. Nat. Hist. Soc. Jour. XXVIII, 1922.
Notes on South Indian Insects. *Report 5th Entl. Meeting, Pusa.*
Status of some Parasitic Hymenoptera in South India. *Jour. Bom. Nat Hist. Soc.*, Vol. XXX, pp. 487-491, 1925.

The following fourteen sub-families have been found represented in South India till now.

1. Vipioninae.
2. Exothecinae.
3. Spathiinae.
4. Hormiinae.
5. Doryctinae.
6. Rhogadinae.
7. Cheloninae.
8. Microgasterinae.
9. Braconinae (Agathinae).
10. Cardiochilinae.
11. Opiinae.
12. Meteorinae.
13. Aphidiinae.
14. Alysiinae.

Sub-Family VIPIONINÆ.

This recent name for the group previously known as *Braconinæ* was proposed by Gahan[1] and it has been accepted as valid by almost all recent workers. The important features of this subdivision have been recently summarised by Musebeck* as below :—"Head varying from transverse to cubical; mandibles normal, touching or crossing at tips and forming with the emarginate and anteriorly somewhat elevated clypeus a more or less circular opening; occiput entirely immargined, anterior wing with three cubital cells; first discoidal cell always separated from the first cubital; sub-discoideus never interstitial with the first abscissa of discoideus, second abscissa of discoideus always much longer than third, submediellan cell very short, never more than one-fourth of the mediellan cell, cubitella originating at the end of mediella; post nervullus absent." Practically almost all the genera till now included under the old group *Braconinæ* fall under this Sub-family. Very little work has been done till now on this group[2] and it stands in great need of generic revision. There is little doubt that a number of genera will prove synonyms and many species will call for a correct generic arrangement. Such a work is far beyond the limited scope of this paper and the only attempt made in that direction is to place the known South Indian forms, as far as possible, in their correct and acceptable positions.

VIPIO, Latreille (1805) GLYPTOMORPHA, Holm. (1868).[3]

Vipio smenus, Cameron.[4] [Plate VIII, fig. 4.]

Iphiaulax smenus, Cameron, p. 107, *Entomologist*, 1905.
Glyptomorpha smenus, Ramakrishna Ayyar, p. 263, *Rept 5th Ent. Meet., Pusa*, 1923.
Glyptomorpha smenus, Ramakrishna Ayyar, p. 489 *B. J.*, XXX, 1925.

This species was originally described by Cameron from specimens collected at Deesa in the Bombay Presidency by Colonel Nurse as an *Iphiaulax*. The follow-

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[1] *Proc. U. S. National Museum*, LIII, p. 196, 1917.

[2] Szepligeti and Enderlein have done some work on Asiatic and Australian forms of this group recently.

[3] *Vipio* and *Glyptomorpha* have been found to be congeneric according to Roman (*Vide* p. 124, *Ent. Tidskr.* 1910), and this view is accepted now.

[4] *I. smenus*, Cam., has been shown to be a synonym of *Glyptomorpha pectoralis*, Brutte 1832; see *Entom. Mitteilungen*, XIV, 39-40 (1925)—Editor.

* *Proc. U. S. National Museum LXVII*, 1925, p. 3.

ing additional notes may be added to supplement Cameron's description of the insect recorded twenty years ago.

The hyaline patch at the region of the first cubical cell extends, though not very clearly, to the lower edge of the wing; there is a narrow hyaline streak along the second transverse cubical cell; the extreme base of both the wings is also hyaline. The apical region of the stigma is dark. There is a small dark spot on each tegula. The terebra is red, while the sheaths are dark. The ocelli, which are dark, are placed on a raised area on the vertex. The mouth parts are rostriform; these and the clypeus are fringed with hairs. Median segment has a distinct longitudinal grove, more or less crenulated. The fifth and following segments are smooth.

The male has the fifth and sixth abdominal segments dark, the former imperfectly and the latter completely. The abdomen is more or less cylindrical and parallel sided. In the wings the radial does not reach apex of wing, the 2″ cubital is almost as broad as long, 2′ transcubital is curved; the 1″ abscissa of radius is very short, much shorter than either of the two trans-cubital nervures, 3″ cubital very broad distally. In other respects similar to female.

Length ♀ 14mm. terebra 25 mm. ♂ 12-14mm.

In South India this insect has been noted in Coimbatore and Bellary Districts. All reared specimens were bred out of Buprestid grubs; from species of *Sphenoptera* boring into stems of *Cajanus indicus*, groundnut, and cotton.

The parasite figured in the coloured plate of the Cotton Stem-borer (Plate XX) in Lefroy's *Indian Insect Life* is apparently this Braconid. All these Buprestids being pests, this parasite may be considered as one of economic importance.

Vipio gracilis, n. sp.

This is a smaller and slender species compared to *smenus*, but in general colouration and structure it is similar to the latter. General colour rufous, wings dark fuscous with the usual hyaline spots; basal portion of stigma yellowish. Head and mesonotum sparsely punctured. Median segment closely punctured and covered over with thin greyish down. Abdomen more or less cylindrical. The first four segments are closely and coarsely punctured and covered with dark irregular patches, especially the 3rd segment. One female specimen from Coimbatore has the mesosternal plate shining dark brown in colour. Terebra very long, more than double the length of the body. Male with the abdomen somewhat compressed dorsoventrally. The antennal flagellum is dark reddish brown. Abdominal segments five and six dark coloured. There are variations in size in this species.

♀ 7-9mm. terebra 15 to 20mm.

Reared as a parasite on Buprestid borers on pulses. Coimbatore. Both *smenus* and *gracilis* have been reared from the same lot of pulse-borers in Coimbatore. This

new species appears to be different from both *V. nursei* and *V. unicolor*, recorded by Cameron[1] from Baluchistan.

STENOBRACON, Szepligeti.

Stenobracon nicevillei, Bingham. [Plate VIII, fig. 5.]

Bracon nicevillei, Bingham, p. 555. *A. M. N. H.* VIII, 1901.
Bracon nicevillei, Bingham, p. 177, *I. M. N.* (3), pl. VII. fig. 2, 1903.
Bracon nicevillei, Bingham, Lefroy, p. 178. *Ind. Ins. Life.* fig. 93, 1909.
Glyptomorpha nicevillei, Ramakrishna Ayyar, p. 263. *Rept. 5th Ent. Mect. Pusa.* 1923.
Glyptomorpha nicevillei, Ramakrishna Ayyar, p. 489. *B. J. XXX.* 1925.

This insect was first described by Bingham from specimens bred out from the Pyralid white borer of sugarcane, *Topeutis nivella*, Fab., (*Scirpophaga auriflua*, Z) in Bengal. It is a fairly common species in South India and has been noted in Coimbatore, South Kanara, Godaveri, Tinnevelly, South Arcot and Anantapur Districts in fields of paddy, sugarcane, and *cholam*. The insect has also been bred out from the white borer on cane and the paddy stem-borer (*Schoenobius incertellus*, Welk). It is apparently a parasite on the different caterpillar borers of these plants, including species of *Chilo*, *Diatraea*, *Sesamia*, etc. In South India, so far as the author has noted, another closely allied species (noted below—*S. deesæ* Cam.) is found to be much commoner, especially in the dry tracts. In Shiraki's Monograph on the Rice Stem-borer in Formosa there is a record[2] of a Braconid parasite under the name of *Stenobracon maculata* V., and a comparison of the coloured figure of that insect with *S. nicevillei* makes the writer doubt whether both the insects are not one and the same.

Stenobracon deesae, Cameron. [Plate IX.]

Bracon deesae, Cameron, p. 433, pl. fig. II. *B. J.* XIV, 1902.
Glyptomorpha deesae. Ramakrishna Ayyar, p. 263, pl. XIX *Rept. 5th Ent. Meet Pusa*, 1923.
Glyptomorpha deesæ. Ramakrishna Ayyar, p. 489, *B. J. XXX*, 1925.

Originally described by Cameron from specimens collected at Deesa. It is very common in Coimbatore and has also been noted in Bellary, Anantapur and Kurnul Districts in *cholam* and *ragi* fields and specimens have been bred out from borer-attacked *cholam* stems. As stated before, this species appears to be commoner in dry tracts than *nicevillei*. Though in general form, the two species

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[1] *B. J.*, *XVII*, pp. 106-107, 1906.
[2] Shiraki. *The Paddy Stem-borer*, p. 135 and plate XI.

appear similar, they can be easily distinguished by the following important differences.

Vertex of head in both sexes with a broad black tranverse band, the fifth and basal part of the sixth abdominal segment in the female and the sixth segment in the male black . . . . *S. nicevillei*

Vertex of head without the broad black transverse band, the fifth and sixth abdominal segments not dark in the female and in the male the sixth segment alone dark . . . . *S. deesae.*

In addition to the above specific differences, in size *deesae* is generally bigger, though varieties in size are found in both the species ; the antennæ have a brownish tinge in *nicevillei*. In some specimens of *deesæ* some of the dorsal abdominal plates have dark irregular markings, and in some males of what are regarded to be *deesæ*, there is present on the vertex a light dark brown patch enclosing the ocelli; this mark is quite different from what is found in *nicevillei.*

Stenobracon frontomaculatus, n. sp.

Female, length 1·5mm. ovipositor 0·8mm. General colour fulvous brown. Head yellowish with the region above the antennæ including the vertex and the malar region up to half the length of the eyes on each side, the tips of the mandibles and a triangular mark on the clypeal region black. Antennæ reddish brown. Thorax and legs fulvous brown. Abdomen, the dorsal surface suffused with rufous brown. Wings fulvous yellow in basal half and fuscohyaline distally beyond the basal nervure A pale transverse hyaline patch runs irregularly across the wing from the base of stigma to the brachial margin of wing ovipositor sheaths dark brown, ovipositor reddish brown.

Head distinctly transverse above—broader than long, as broad as or slightly broader than the thorax, eyes well separated from each other, the front near each eye slightly depressed, a narrow groove extends from anterior ocellus to the dark triangular mark on the clypeal region, the latter smooth. Back of head slightly concave. Antennæ long, almost as long, as body; scape stout and cylindrical distally. Face on each side of clypeus finely shagreened.

Thorax long, prothorax bilobed, the posterior part longer and extending along the lateral side into a broad plate, parapsidal grooves of mesothorax not very clear, central lobe smooth and shining; scutellum, postscutellum and median segment smooth and clothed with short fulvous hairs. The mesopleuræ smooth and shining, the metapleura on each side with an irregular longitudinal depression. Abdomen long, procumbent behind and more or less cylindrical, with the sides almost parallel ; as long as head and thorax, and broader than both. The first segment longer than broad with lateral grooves separating the middle portion into a slightly raised triangu-

lar area which is smooth and covered with fulvous pubescence. Segments two to five have the dorsal surface coarsely rugose with oblique furrows one on each side separating the anterolateral corners. The apical margins of 3rd, 4th and 5th segments have a transverse striated groove. The sutuiriform articulation and that between 3rd and 4th clear and crenulate; apical tergite smooth. The central spot at the base of 2nd segment is smooth and shining, but there is no indication of a clear area as in *nicevillei*. Ovipositor sheaths broad and covered with very fine hairs, ovipositor shorter than abdomen. Wings long, and in most respects the venation is like that in *nicevillei* or *deesæ;* the radial cell is long but does not reach the tip of wings, its 2nd abscissa distinctly curved and the 1st transverse cubital slanting, features which have made the 2nd cubital very narrow anteriorly. The nervellus is slightly post furcal and not interstitial with the basal; this appears somewhat curious for a Vipionine wasp. The recurrent joins the first cubital some distance before its apex.

Habitat. (One female) Coonoor, Nilgiris (5,000 feet), May 1913.

This insect is quite distinct from *nicevillei* and *deesae* in the short ovipositor, the shape and colour of the head and antennæ, and the slight differences in the wing neuration; it might perhaps form the type of a new genus. For the present, however, it is retained as a *Stenobracon* to which genus it appears very close in most characters. The three species of *Stenobracon* noted above appear to be very closely allied to, or even congeneric with, Szepligeti's *Merinotus*,[1] but the writer has not seen any species of the latter, and is not therefore in a position to affirm this fact.

APHRASTOBRACON, Ashmead.

Though included as one of the genera of the Sub-family (Braconinæ) Vipioninæ when it was first erected by Ashmead,[2] later on this genus was given the rank of a tribe and even that of a Sub-family by Ashmead himself in his later work, and Szepligeti in his *Genera Insectorum* volume. Modern specialists are of opinion that the genus should come under the Vipioninæ and does not deserve any special rank The writer has recently brought out a paper under the heading[3] " *The Braconid genus Aphrastobracon*, Ash", a perusal of which will give some idea of his views on the status of this genus. The most striking features appear to be the emargination of the inner margin of the eyes, which are very big, and the oval or almost circular shape of the second discoidal cell in the forewing which makes the submedian cell shorter than the median.

[1] *Ann. Hung. Mus.*, IV, p. 555, 1906.
[2] *Proc. U. S. Nat. Mus.*, XVIII, p. 646, 1895.
[3] *Bull. Entl. Res.*, XVII, pp. 91-98 1926.

Aphrastobracon flavipennis, Ashmead. [Plate XI, fig. 1.]

A. flavipennis, Ashmead, p. 646. *Proc. U. S. N. Mus.*, XVIII, 1895.
A. flavipennis, Ashmead, p. 136, *Proc. U. S. N. Mus.*, XXIII, 1900.
A. flavipennis, Szepligeti, p. 10., *Genera Insectorum. Braconidæ.*, 1904.
A. flavipennis, Ramakrishna Ayyar, *Mem. Dept, Agri. India, Ent. Ser.*, Vol. VIII-12. fig. 12, 1925.
A. flavipennis, Ramakrishna Ayyar, p. 91., *Bull. Ent. Res.*, XVII, 1926.

This wasp, which was first described as the type of a new genus by Ashmead in 1895, was bred out of the lac insect (*Tachardia*) found on *Albizzia lebbek* by Mr. E. E. Green in Ceylon. A detailed description of the general and special characteristics of this insect is given in the author's recent paper referred to above. For over two decades this species was the only known form of the genus and it was in 1917 that Professor C. F. Baker of the Philippines discovered and described[1] a second species, *A. philippinensis*. Two other species have since been described by Enderlein[2] from Africa and one other from India by the writer. The correct bionomics of this wasp was first recorded by the writer in his monograph on the *Nim* Scale, *Pulvinaria maxima*. It is found as a parasite on caterpillars of one or two species of the Noctuid genus *Eublemma* feeding on the lac insect in different parts of South India. It has also been noted on the same caterpillar found on some other Scale Insects, such as species of *Pulvinaria, Lecanium, Anomalococcus*, etc.

Found in different places in South India, especially in and around Coimbatore.

Aphrastobracon maculipennis, Ramakrishna. [Plate X.]

(*Bulletin of Ent. Research*, XVII p. 96, 1926.)

In size and in the colouration and venation of the wings, this species is quite distinct from *A. flavipennis*. It is bigger in size and the forewings have dark brown markings in two or three places. The head is not quite transverse.

A. Fore wings flavohyaline, size smaller, scape of antennae brownish . *A. flavipennis*, Ash.
B. Fore wings with smoky brown marks on first cubital and the two discoidal cells--size bigger, scape of antenna yellow with a narrow dark streak at side . . . . *A. maculipennis*, Ramakr.

A. maculipennis has been collected at Coimbatore and in the Kurnul District. Nothing is so far known of the host relations of this insect.

Aphrastobracon alcidiphagus, n. sp.

Almost equal in size to *maculipennis* and in general colour and structural features, etc. more or less similar to it. The striking features of this species, which separate

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[1] *Phil. Jour.*, XII, p. 213, 1917.
[2] *Archives Naturges* 84, Jahr. 1918 *A. gratiosus* and *guttifer*, p. 53.

it both from *flavipennis* and *maculipennis*, are the differences in the colouration and venation of the fore wings. The wings are not uniformly flavous as in *flavipennis* nor is the smoky brown marking similar to that of *maculipennis*. As in the latter the costal edge above the first cubital is black and the base of the first cubital smoky brown, but both the discoidals are quite spotless and clear with slight darkening of parts of surrounding veins of the second discoidal. The rest of the wing is *flavoiridescent* The shape of the discoidal is quite oval, nervulus is interstitial with the basal, so that the median and sub median cells are equal in length along the median vein, the nervulus is also very feebly developed, very short and vertical, not curved or slanting.

Described from two specimens reared as parasitic on the stem-boring weevil grub (*Alcides affaber*) attacking *Hibiscus cannabinus* (*Gogu*) plants in Coimbatore.

The three Indian species, so far known, can be separated with the help of the following key.

A. Wings uniform flavous without dark markings . . . *A. flavipennis*, Ash.

B. Wings with dark brown markings.

(*a*) The costa above first cubital black, the base of the first cubital and both the discoidals with dark brown infumation . *A. maculipennis*, Ramakr.

(*b*) the costa and base of first discoidal as above, but both discoidal cells immaculate, only the surrounding veins of 2nd discoidal being slightly infumate . . . . *A. alcidiphagus*, n. sp.

TROPOBRACON, Cameron.

(*Spolia Zeylanica*, Vol. III, p. 91, 1905.)

Tropobracon luteus, Cameron var. nov. *indica*. [Plate XI, fig. 2.]

(*Spol. Zeyl.*, III, p. 91, 1905).

T. luteus is the only species of the genus, erected by Cameron for a Ceylonese insect. Though South Indian forms do not exactly correspond to Cameron's description of *luteus*, the differences do not appear to be sufficiently remarkable and constant to warrant the erection of a separate species, and so the Indian form may be considered as a variety of that species. The general colour is not quite luteous, it is a light brickred ; the antennæ, especially in the males, are not black but are of a light brown colour, the abdomen is of a paler hue than the thorax and head, and has a light inconspicuous brown macula on either side of the basal area of the second abdominal segment. The hind tibiæ and tarsi are not clearly infuscated. The abdominal segments are shagreened dorsally and not closely punctured. There are also some slight differences in the comparative lengths of the abscissæ of the radial nerve.

Habitat. This wasp appears to be fairly common in some of the paddy tracts of South India, such as the Godaveri Delta, South Kanara, Coimbatore and Anantapur Districts. It has been bred out as a parasite on the paddy stem-boring caterpillar, *Schœnobius incertellus*, Well. in some of these places. It is likely that this insect plays some appreciable part as a natural enemy in checking the multiplication of important pests of paddy in South India.

EUTROPOBRACON, gen. nov.

This genus differs from Cameron's *Tropobracon* in the following characters. The abdomen is not short and broad, but is elongated and more or less cylindrical, with the dorsal side distinctly convex; the abdominal sutures are clear and separate the abdominal segments from each other distinctly. There is no basal area on the 2nd segment. The dorsal surface of abdomen is coarsely punctured and is even more or less corrugated. Ovipositor very long, longer than abdomen. The parapsidal furrows are not so very distinct as in *Tropobracon.* The first joint of the hind tarsus is four times the length of the third, and more than twice the length of the second joint. The junction of the recurrent nervure is not so distinctly away from the apex of the cellule as in the other genus.

The genus comes nearest to *Tropobracon*, Cameron, with the above clear differences, of which the most striking appear to be the elongated and cylindrical shape of the abdomen with segmental connections constricted, the absence of the basai area on the 2nd abdominal segment, the greater length of the ovipositor, and the structure of the hind tarsus. Type *E. indicus*, n. sp.

Eutropobracon indicus, sp. nov. [Plate XI, fig. 3.]

Length 3·50mm. ovipositor 2mm. General colour flavous brown, tips of mandibles and ocelli darkish brown, antennæ basally greyish brown, distally dark. The first two or three antennal joints sprinkled with dark. A minute dark line near each tegula, a pair of dark spots on each side of the median dorsal line of abdominal segments 2 to 5 inclusive; the ovipositor, the posterior tarsi and tarsal tips of the four front legs dark. The dark spots on the 2nd abdominal segment are somewhat elongate antero-posteriorly.

Face and vertex of head broad. The parapsidal grooves clear and the mesonotal lobes prominent, base of scutellum crenulated. Head and thorax with fine punctures and clothed in pale white short pubescence. Sides of propodeum slightly drawn out into a blunt projection laterally. Abdomen elongated and cylindrical. Dorsal surface profusely punctured and even corrugated. 1st segment short. Ovipositor longer than broad.

Wings clear hyaline and irridescent, stigma and veins brownish, second cubital cell smaller than first and is more or less quadrate. Radial cell very long, its 3″ abscissa is a little more than four times the length of the first two together.

Basal joint of hind tarsus is five times the length of the third joint and nearly three times that of the second. Described from five females from Walayar Forests, South India.

MICROBRACON, Ashmead.

Synonyms: *Bracon* (part) Szepligeti; *Habrobracon*, Ashmead; *Tropidobracon*, Ashmead; *Habrobracon*, Cushman; *Microbracon*, Viereck; and *Amyosoma*, Viereck.

Under this genus, which includes numerous species distributed all over the world, an attempt is made to include all forms of the sub family Braconinæ so far studied by the writer, especially in South India, which answer to the following recent description of this genus by Musebeck.[1]

"Head transverse to subquadrate, never rostriform, always wider than long antero-posteriorly; malar space variable but always much less than half the eye height, eyes oval, rather broad, bare or indistinctly very sparsely hairy; frons not or scarcely impressed, scape short, not or hardly longer than first flagellar segment, broadening evenly from base to apex, not excavated, and not prominently rimmed at apex, first segment of flagellum always much longer than pedicel, as long as or longer than the second, and never excavated below nor with a prominent rim at apex; antennal segments varying in number from thirteen to forty or more, parapsidal grooves usually well indicated, with the mesonotal lobes distinct, sometimes the parapsidal grooves defined only by lines of pubescence, the mesoscutum being rather flat, mesonotum, pleura and propodeum usually smooth and polished, although sometimes very finely sculptured, suture between mesoscutum and scutellum finely foveolate, propodeum rarely with a median longitudinal carina, but frequently with a stub of a median ridge at apex, wings varying from clear hyaline to strongly infumated, usually dusky on the basal two-thirds, nervulus interstitial with basal vein, recurrent vein entering first cubital cell, second cubital cell varying greatly in length, the second abscissa of radius being sometimes no longer than the first abscissa, sometimes much more than twice as long, radius usually attaining wing margin near the apex of wing, rarely much before; spurs of posterior tibiæ rather short, never distinctly half the metatarsus, abdomen elliptical or ovate, conspicuously angled at the junction of first and second segments, the first abdominal tergite with lateral membraneous margins, the chitinized plate of this tergite with two oblique grooves converging anteriorly, second abdominal tergite without lateral oblique diverging impressions, suturiform articulation frequently broad and foveolate, none of the following sutures deep or foveolate; third tergite without transverse or oblique impressions setting off the anterior lateral corners of the tergite; abdomen varying from entirely smooth and polished to entirely rugulose or granular, ovipositor sheaths varying from less than one-fourth the length of the abdomen to longer than the

[1] *Proc. U. S. National Museum.*, Vol. 67, p. 3, 1925.

entire body. This genus includes the smallest of the Vipiinæ; very rarely does the body attain a length of 5mm."

Apparently according to this definite characterisation of the genus, some of the Indo-Ceylonese species recorded by Ashmead, Cameron, Szepligeti, etc. under *Bracon* should be included under *Microbracon*, although a good many others described under the former name have to find places under *Iphiaulax*, *Campyloneurus*, and other allied genera. From a study of the brief and often very incomplete descriptions on record, the writer is of opinion that the species *Bracon greeni*, Ashmead (1895), from Ceylon, *B. asiaticus*, Szepligeti (1906), from Ceylon, and *B. tachardiae*, Cameron (1912), from North India, are without doubt genuine species of *Microbracon*. Others of a doubtful nature are *B. quettaensis* and *B. iridipennis* of Cameron (1906), both from Baluchistan, and *B. fletcheri*, Silvestri (1916) from Pusa. However, the only species that has so far been definitely recognized and described as a *Microbracon* from India is the Indian Cotton Boll-worm parasite, *M. lefroyi*, D. & G. which was originally described as a *Rhogas* by Dudgeon and Gough[1] and accepted and figured as such in Pusa publications until its generic status was correctly diagnosed and the species redescribed by Brues in 1919.[2]

Microbracon lefroyi, Dudgeon and Gough.

Rhogas lefroyi, D. & G., p. 109, *Agri. Jour. of Egypt*, Vol. III, 1913.

Rhogas lefroyi, D. & G., Fletcher, p. 106, *Rept. 2nd Ent. Meet., Pusa*, 1917 (Col. pl.).

Microbracon lefroyi, Brues, p. 1026, *Rept. 3rd Ent. Meet., Pusa*, 1919.

Microbracon lefroyi, Husain and Mathur, p. 298, *Rept. 4th Ent. Meet., Pusa*, 1921.

Microbracon lefroyi, Husain and Mathur, p. 34, *Rept. 5th Ent. Meet., Pusa*, 1923.

This insect being one of some economic importance and displaying variations in colour features, it will not be out of place here to reproduce the description of Brues which may be of help to both systematic and economic entomologists for purposes of comparison and correct identification.

"*Female.* Length 2-3mm. Male, length 3-1·5mm. (D. & G.) Ovipositor slightly longer than the abdomen, but not quite so long as the abdomen and propodeum together. Body honey-yellow, varied with black and piceous, legs usually somewhat lighter and the sides of the abdomen often much paler. Black markings variable, in melanic specimens they include spot on front above base of antennæ, ocellar space, occiput antennæ, stripe on each of the three lobes of mesonotum, scutellum, propodeum, irregular marks on pleuræ, abdominal segments three to five, except narrow lateral border and sheaths of ovipositor. In light specimens the entire body is pale honey-yellow with only the flagellum of antennæ, tips of man-

[1] *Agri. Jour. Egypt*, Vol. III, p. 109, 1913.

[2] *Rept. of 3rd Ent. Meeting, Pusa*, p. 1026, 1919.

dibles, ocellar triangle, clauds on the second and third segments, and ovipositor black, piceous or brown. Wings faintly to distinctly tinged with brown, the stigma and veins fuscous. Antennæ 25 to 27 jointed, the joints slightly decreasing in length to apex, the basal ones barely twice as long as thick, Mesonotum shagreened, scutellum shining, propodeum distinctly shagreened, but often more nearly smooth basally toward middle, without median carina except at extreme apex which is finely areolate, mesopleura finely shagreened, with a narrow polished strip along its posterior margin. Abdomen broadly oval or nearly circular in outline, first segment twice as wide at apex as at base, posterior corners separated by deep grooves, median field triangular, second segment four times as broad as long, with an obsolete median carina, third segment a little longer than the second, following shorter, entire abdomen except corners of first segment finely roughened, without distinct punctures or reticulations, except sometimes on the second and third segments near the middle, second suture finely crenulate. Wings as figured by Dudgeon and Gough (*loc. cit.*).

Male. Length 2mm. Similar to the female with the antennæ 24-25 jointed and the head and thorax generally darker; the abdomen has the sixth segment black and lacks almost all the yellow at the sides, although the first two segments are yellow and usually paler than in the female.

There is an enormous amount of colour variation in the large number of specimens examined, a slight variation in the number of antennal joints and in the sculpture of the propodeum and abdomen, but none of these seems to be in any way definite or correlated."

Before discussing the general relations, geographical distribution and food habits of the insect described above, it will be found advantageous to reproduce the original descriptions of two other insects described earlier, *viz.*, *Bracon greeni*, Ashmead, from Ceylon (1895) and *Bracon tachardiae*, Cameron, from N. India (1912) as these are likely to help us in judging the relations of *lefroyi* with forms closely allied to it. Both these are typical species of *Microbracon*.

Bracon (*Microbracon*) *greeni*, Ashmead.[1]

"*Female* : Length 2·5 3 mm. ovipositor two-thirds the length of abdomen. Brownish yellow, disk of metathorax, extreme apex of 2nd abdominal segment and large dorsal blotches on third and fourth segments black. Head and thorax subopaque almost smooth, antennæ 24 jointed, brown black and nearly as long as the body. Wings hyaline, the stigma and veins brown, the second branch of the radius about three times as long as the first, the second sub-marginal cell being a little longer than the first, the recurrent nervure joins the first submarginal cell a little beyond its apical third. Abdomen broadly ovate and shagreened, the segments two to four sub-equal, the following a little shorter.

[1] *Proc. U. S. N. Mus.*, XVIII, p. 645, 1895.

Male : Length 2-2·5 mm. Agrees with the female except that the antennae are 25 jointed, longer than the body, while segments 3-5 above are black.

Habitat : Pundaluoya, Ceylon. Three females and two males reported by Mr. E. E. Green as having been bred from *Tachardia albizzia.*"

Bracon (Microbracon) tachardiae, Cameron.[1]

"*Female :* Length 2 mm. ovipositor 1 mm. rufo-testaceous, legs paler distinctly yellowish in tint. Antennae, metanotum, and the third and fourth dorsal abdominal segments black, except narrowly on the sides. Second transverse cubital nervure is ⅓rd the length of second abscissa of radius. In ♂ greater part of mesothorax black. Basal abdominal segment more yellowish than others. 2nd abdominal segment strongly and closely punctured. There is an indistinct keel down the centre of second segment and its base is slightly dilated. Abdominal black marks in ♂ vary in extent, second and following segments may be entirely black or with only narrow transverse lines on 2nd and 3rd segments."

From a comparison of these two descriptions with that of the insect described above by Brues as *Microbracon lefroyi* coupled with the remarks of both Cameron and Brues to the effect that there is a good deal of variation in the forms described by them, one is led to doubt whether all these forms are not one and the same or varieties of a single variable species. The general form and colouration of all three, especially the dorsal dark blotches on abdominal segments 3 and 4 and the same comparative size, at any rate, make them, without doubt, very closely related forms ; and the host relations of the last two *greeni* and *tachardiae* lend additional evidence to this theory. Evidently, neither Cameron nor Brues has seen the description of Ashmead's *greeni*, though the latter author expresses some doubt that the species might have been previously described. There is little doubt that had either of them seen the description of *greeni* they would have surely hesitated before they gave new specific rank to their forms or at least would have indicated their close relationship. Since the writer has not seen the type of Ashmead's *greeni* nor any authoritatively named species of Cameron's *tachardiae,* he does not feel justified in adding anything more on the relations of these different forms at present, though he feels it essential to mention in this connection the existence of their close relationship, which might attract the attention of future monographers.

Coming to the forms of bollworm parasites which now pass for *M. lefroyi*, D. and G., there is no doubt there exists a considerable degree of colour variations. However, on a careful examination of a fairly large series of South Indian material and a few species of parasites very kindly sent to the writer by the Government Entomologist, Punjab, the Imperial Entomologist, Pusa, the Cotton Entomologist, Surat, and the Forest Zoologist, Dehra Dun, it appears possible to sort these parasites out

[1] *Ind. For. Rec.*, IV, p. 106, 1912.

into a few more or less different varieties, if not into distinctly defined species, possessing some more or less correlated features ; of course, there will still remain a few forms showing intermediate characters. Before pointing out the structural and other characteristics of these varieties, one or two remarks may be made regarding Brues' description of the species. He describes two colour forms of the female—the melanic and the light ; unfortunately he adds no illustrations which would help us considerably. There is, however, a colour-plate of this insect under the old name *Rhogas lefroyi* published at Pusa in 1917 [1] but unfortunately again, the figure of the female insect in that plate does not answer to either of the two forms of Brues. It also appears that there is some error in the description where Brues, speaking of the light coloured form, adds, " *clouds on the 2nd and 3rd segments*." This is apparently an error for 3rd and 4th segments since there is no dark cloud found on the 2nd segment in any of the numerous specimens of bollworm *Microbracons* examined so far.

Variety A This is the melanic form of the female noted by Brues. This variety with its clear dark markings on the head and thorax is quite distinct from the others. So far, the writer has not seen a single specimen of this form from anywhere outside the Punjab and most of the forms received from Lyallpur belong to this variety. This has certainly not been found in South India as yet and is perhaps absent in Bombay and Pusa as well, but since it was possible to examine a few forms only from these places, one cannot be sure of its distribution outside South India at present.

Variety B. The female insect in the Pusa colour-plate may be taken as a more or less typical form of this variety. The main features appear to be :—head and thorax testaceous brown, antennæ dark brown, legs and abdomen light yellowish. The ocellar area, irregular marks on the post scutellum and propodeum, broad transverse blotches on abdominal segments three and four and sheaths of ovipositor dark. The general colour of the propodeum and mesosternum is of a darker brown colour, and the latter is polished and shining ; the extreme median dorsal end of the former shows the stump of a small carina. The tips of the tarsi are also dark ; the costa and stigma of the wings rather fuscous. In some intermediate forms the dark patches on the 3rd and 4th abdominal segments are of a deep black colour and show no median interruption, whereas in some there is a median dorsal light, narrow area dividing the dark patches into right and left portions in both the segments. In some the basal portion of the 5th segment is also dark. There is considerable variation in the colouration of the propodeum ; some have the whole area more or less dark, while others have only the edges of the postscutellum more or less dark and extra chitinised. In many of these there is an indication of a median carina along the mid dorsal line of the 2nd segment and in some the extreme apical margin of the second segment is also of a darkish tinge. In the fore wings the second abs

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[1] *Rept., 2nd Entl. Meet., Pusa*, p. 106, 1917.

cissa of the radius is just about three times the length of the first and the first intercubitus about one and a half times as long as the second.

Under this variety (B) are included (1) all *Microbracons* reared on *Earias* spp. in South India, (2) the form reared out of *Adisura atkinsoni* attacking field beans, (3) a few found parasitizing *Heliothis obsoleta*, occasionally noted on cotton bolls, (4) the *Microbracon* found parasitizing *Rabila frontalis*, Wlk., (5) a few parasitizing the grub of the weevil, *Alcides affaber* on *Gogu* (*Hibiscus cannabinus*), and (6) some specimens reared from *Corymbosa* pods in Coimbatore. Even among these different lots there is some degree of variation in the colour markings. The forms reared on *Adisura*, *Rabila* and a few on *Earias* show a deeper ground colour which is more or less reddish brown and the dark markings on the abdomen are also blackish, and in many, especially in the *Adisura* parasites, the abdominal black marking is one black uninterrupted ovid patch on the 3rd and 4th segments, and the mesosternum is polished and of a shinning dark brown colour. On the other hand, those on *Alcides* present a lighter hue where the abdominal dark markings are clearly interrupted and the dark markings on thorax are fewer and indistinct. There are, of course, intermediate forms between these two extremes. A few specimens of *Microbracon* received from the Cotton Entomologist, Surat, collected from Kandesh and Surat, also come under this variety, the Surat form being one with the mesothorax darker than the Kandesh one.

Some specimens from the Imperial Entomologist, Pusa, including one which appears to have been identified by Brues himself, also come under this variety. Recently at the request of the writer, about half a dozen specimens of *Microbracon* bred from lac were received from the Forest Zoologist, Dehra Dun, with the information that they may be Cameron's *Bracon tachardiae*. They are found to be undoubted *Microbracon*, and so far as the writer could make out from the few poorly preserved specimens, these might be brought under this second variety for the present, though there are indications in their colour and form which bring them pretty close to the melanic variety of the Punjab ; but this can be definitely cleared only by examining more specimens from the locality.

Variety C. The forms which are brought under this category include only those parasites which are invariably forms reared from the pink bollworm (*Platyedra gossypiella*) of cotton. The writer has not as yet come across a single specimen of this kind reared from *Earias* nor has he come across any specimen of variety B bred out of the pink bollworm in South India so far. This form is of a smaller size than the previous ones and apparently confines its attacks to Microlepidoptera. The important distinguishing features, so far as the writer has been able to make out, are :—the dark colouration is reduced to a minimum, the 3rd and 4th abdominal segments have each only a pair of faint dark marks at the apical mid-dorsal region and they are fainter in segment 4 than in 3. *The ocellar area is never dark* as is invariably the case in the other varieties ; propodeum and mesopleura with no dark markings. Head more or less yellowish and the antennæ greyish to reddish brown

and only darkish distally. The whole body has a light reddish to ochraceous brown colour, the legs yellowish except the extreme tips. Sometimes a minute dark dot on dorsum of propodeum and near the tegulæ. The wings are hyaline, stigma and veins light brown; the second abscissa of the radius is over three times the length of the first, the second cubital cell is long and narrow, the first transverse cubitus being twice the length of the second.

Under this are included (1) the form found on Pink Bollworm of cotton and (2) the *Microbracon* found parasitizing the brinjal budworm (*Phthorimaea blapsigona*) in Coimbatore, which also appears to possess the features described above. It is evident that the original idea that the *Microbracon* parasites of the pink and spotted bollworms are the same has to be given up.

Before concluding this account of *Microbracon lefroyi*, a few observations may be added on its systematic position and relations. From what the writer has been able to make out, the first variety possesses sufficiently distinct and characteristic features both as regards general form and distribution, and probably deserves specific rank. Anyhow, for the present, it can be designated as *Microbracon lefroyi* var. *lefroyi* and, if in course of time this variety is found constant in its characters and distribution, it may be advantageously made the type of *Microbracon lefroyi* since Brues does not seem to have designated any. With regard to variety B which is made to include the great bulk of the *Earias* material studied, the writer is not quite sure whether he has not included more than one kind under this heading, since there are extremes in the colour variations. If the lac bred insects received from Dehra Dun are really *Bracon tachardiae* and if they so agree with the *Earias* parasites as to be included under one variety as has been done above, then a change in the nomenclature is essential and all *Earias* parasites brought under this variety should be *Microbracon tachardiae* or its varieties, since Cameron's name has the prior claim. And again there is the further contingency of both the names *lefroyi* and *tachardiae* giving place to *greeni*, if the latter is found to be the same as *tachardiae* which is not unlikely. In the opinion of the writer, therefore, all these varieties may be provisionally given specific rank until further work is done in India on this very interesting and important genus. Even if there is error in this arrangement it is better in the words of Col. Swinhoe "to split than to lump." These three forms may, therefore, be referred to as below.

(A) the Punjab form on *Earias* (the melanic form of Brues) as *M. lefroyi*, D. & G.

(B) the common form on *Earias* and lac as that on lac in Dehra Dun as *M tachardiae*, Cam. (*M. greeni*, Ash. ?) Plate v.

(C) the parasite on the pink bollworm and the brinjal bud worm as *M. gelechidiphagus*, n. sp.

A few papers have been published on *Microbracon lefroyi* in the Punjab during the past few years, but unfortunately there is no indication in any of these as to

which of the numerous variable forms is referred to as *M. lefroyi* in these papers. It is needless to add how very important it is first to know exactly which particular species or kind of parasite one is dealing with before considering its economic importance and its application. For instance, it is clear, so far as the writer has seen, that the *Microbracon* attacking the pink bollworm in S. India, at any rate, is quite a different creature from that parasitizing *Earias* though till now they were regarded as one by more than one worker. Further investigations on this line are sure to bring to light many important facts and clear a good deal of confusion that now exists regarding the bionomics of these important parasites.

Microbracon incarnatus, sp. n.

A small bright reddish brown form.

Female: Length 2·75 mm. Terebra 1 mm. Colour ; Head ochraceous. Thorax and abdomen bright reddish brown, the latter often of a paler hue, legs flavous. ocelli and antennæ greyish brown, the latter darkish distally. Wings flavohyaline, clearer towards the posterior region, stigma and veins pale brown ; a minute dark spot is sometimes found near each tegula. Ovipositor dark.

Vertex of head broad and smooth. Mesothorax with the parapsidal grooves shallow and hairy. Lobes finely punctured, base of scutellum very finely crenulated. Pleuræ and propodeum smooth. Abdomen ovoid, slightly convex, and finely shagreened above. Second suture not distinct. Ovipositor as long as abdomen. The body is clothed with sparse white short pubescence, especially on the thorax. Second cubital cell of wings longer than first, second abscissa of radius just a little less than four times the length of the first abscissa, and only slightly shorter than the third. The recurrent nerve meets the first cubital very close to its junction with the second.

Male: Length 2·5 mm. Similar in all respects to female, but smaller.

Habitat: Manganallur, Tanjore District. Parasitic on the Gelechiad *Dactylethra candida*, Stt., which is found boring and causing galls in pods of *Tephrosia purpurea*, a valuable green manure plant in South India. Described from five females and four males. This species is readily distinguished from others by the smaller size, the uniform bright reddish colour, and the immaculate abdomen.

Microbracon melleus, n. sp.

Female: Length 2-2·5 mm. Ovipositor ·75 mm. Body of a uniform honey colour. Head yellowish, antennæ and ocellar area pale to dark brown. Mesosternum shining dark brown. The metathorax in some, with dark brown markings. Abdomen uniformly flavo-testaceous and shining, legs flavous, with the tarsal tips dark. In some specimens there is a small dark spot near each tegula ; wings with

basal half flavous and distal half hyaline. Ovipositor dark. Body short, flattish and ovoid. Head transverse, as broad as or slightly broader than mesothorax, antennæ short, stout and hairy with 15-18 joints. Scape stout and swollen. Parapsidal furrows not distinct, lobes sparsely punctured. Base of scutellum crenulated. Median segment with dorsal surface more or less coarsely reticulate. Abdomen broad and ovoid, segments broader than long, first segment with carina towards posterior border, tergites of all other segments smooth and shining; the median dorsal line along the abdomen is slightly convex and appears as though it were a longitudinal carina. Second segment large, the second suture not specially prominent. Ovipositor short, about half the length of abdomen. The whole body is clothed thinly with short white pubescence. The 2nd cubital cell in the wings smaller than the first and very much narrowed anteriorly. First abscissa of radius almost equal in length to the second, while the third is more than three times the length of the second. The recurrent joins 1st cubital at some distance from its apex, and this distance is almost equal to the length of the second intercubitus. The third cubital nervure is rather faint.

Male : 2 mm. Slightly smaller and narrower in build. There are dark marks on back of head, and on mesothorax near tegulæ. The mesosternum and propodeum dark brown and polished. Antennæ slender and long with 20 to 21 joints.

A small, short and stout built species with a uniform melleous colour.

Habitat. Described from a few males and females reared as parasites on the Pyralid caterpillar, *Crocidolomia binotalis*, a common pest of Cruciferous plants, Coimbatore. A few mutilated specimens in the Coimbatore collection reared out of some galls collected from *cholam* ear-heads in Coimbatore also appear to be this species.

This species appears to be very close to *M. kitchineri*, D. & G., with some slight differences in colour.

Microbracon chilocida, n. sp. [Plate XII, fig. 1.]

Female : Length 4-5·25 mm., ovipositor 2 mm. A black and red species with the whole body very smooth and shining. Head, thorax and front legs reddish brown, the latter slightly paler in colour especially at the tarsal region; the ocelli, antennæ excepting the first one or two joints which are slightly brownish, and the tips of mandibles dark. The propodeum in some specimens has a shining dark brown colour. The two posterior pairs of legs dark brown with pale and fuscous markings. Wings dark fuscohyaline. Abdomen shining blackish brown, the membraneous edges and parts of the ventral side of the 1st and 2nd segments pale whitish yellow. Segments 2-6 with narrow pale white transverse bands at the apical margin. This colour is more prominent at the sides than at the mid-dorsal region except in the last two segments, and it is very faint in many specimens. Ovipositor light brown, sheaths dark. The propodeum and proximal portion of the abdomen

exhibit some slight variations in colour. In some the propodeum has hardly any dark markings, and the first and second abdominal segments also show a tinge of reddish brown colour.

Head as broad as, or slightly broader than mesothorax and smooth. The front above the antennæ is hollowed out, clypeus and face with sparse very short white pubescence. Mesothorax gibbous smooth, parapsidal furrows not very deep and distinct. Hind femur and tibia slightly incrassated. Propodeum convex and smooth, with whitish pubescence. Abdomen ovorhomboidal, very smooth and shining, the second suture neither distinct nor crenulated. Ovipositor as long as abdomen. The second cubital cell in the wing is longer than the first, second abscissa of radius a little more than two and a half times the length of the first abscissa ; recurrent nervure almost interstitial with first intercubitus.

Male : Length 3·75 mm.--4 mm. Smaller than the female. Abdomen narrower and more or less cylindrical. The vertex and face above the antennæ dark, though in some specimens this dark colour is rather brownish and confined to a smaller area on the head; the marginal pale white bars on the abdominal segments not very clear. Otherwise of same colour and general form as the female.

Habitat : This insect is very common in South India and has been reared out as a parasite on the Pyralid caterpillar, *Chilo simplex*, which is an important borer pest of *Sorghum* and *Ragi* in South India. Very common in and around Coimbatore, and recorded from the Ceded Districts also.

Var. nigrocephala. A few females of a parasite, very similar to the above species in most respects, have been reared by the writer from the stem borer caterpillar on brinjal (*Euzophera perticella*). These differ from typical *chilocida* in having the head completely dark and with the front femora and tibia having dark brown markings. The recurrent nervure in the wing is interstitial. Until more specimens and males are got, it is safe to consider this form as a variety of *chilocida.*

Microbracon pictus, n. sp.

A light brown species mottled with dark markings.

Female : Length 4·50 mm. Terebra 2·75 mm.

Head dark brown to black, thorax pale to reddish brown. Abdomen above light brown with dark markings on the tergites, ventral side pale whitish. Abdominal tergites 2-5 with a pair of dark broad maculæ one on each side of mid-dorsal line, the mid-dorsal longitudinal line and the sides of the segments of a pale whitish colour. Legs pale brown mottled with dark markings. Ovipositor and antennæ dark brown.

Body more or less elongated. Head almost quadrate, with a shallow narrow groove around ocellar area which is on a slightly higher level. Head very closely and finely punctured. Thorax shining and smooth, sparsely punctured. Parapsidal grooves clear and hairy, but not very deep, central lobe gibbous. Propodeum

smooth with a median dorsal darkish carina which forks posteriorly. Abdomen elongated and the segments distinct, the tergites coarsely punctured and the punctures almost form irregular longitudinal striæ, especially on the first four segments. The median longitudinal narrow light coloured area is convex and appears more or less like a longitudinal carina. Ovipositor long, as long as abdomen and hairy; body clothed with sparse short, white pubescence especially on the thorax and abdomen. Wings well developed; second cubital cell larger than the first, the recurrent nervure joins the first cubital some appreciable distance from its apex, second abscissa of radius a little more than three times the first abscissa.

Male: Length 4—4·25 mm. Similar to female in most respects; the body is of a darker tinge, and on the abdomen the paired dark markings are not always clearly defined as in the female.

Habitat: Described from eight males and one female. Coimbatore. Parasitic on a pyralid caterpillar boring into the fruit pods of *Pongamia glabra*.

Besides the above definitely noted species of *Microbracon*, there are in the Coimbatore collection stray specimens of *Microbracon* quite different from the ones described above, but the material not being sufficient they are not described at present. Among these are species parasitic on the cotton bud caterpillar—*Phycita infusella*, and the gram borer, *Etiella zinckenella*. There is no doubt that this genus is very well represented in India and many more forms are sure to be discovered in course of time.

The species noted above may be distinguished with the help of the following rough key.

I. Red and dark coloured species with fuscous or fusco-hyaline wings.

(*a*) Abdomen smooth and shining . . . . . . *chilonida*, n. sp.
(*b*) Abdomen coarsely punctured and corrugated . . . . *putus*, n. sp.

II. Reddish or rufoflavous forms with hyaline or flavohyaline wings.

(*a*) Abdomen with dark maculæ above.

(1) Portions of head, mesothorax and metathorax blackish with 3, 4 and often the 5th abdominal tergites dark above . *lefroyi*. D. & G.
(2) The dark markings much less on thorax and the maculæ only on 3rd and 4th abdominal segments and interrupted . *tachardiae*. Cameron.
(3) Dark markings confined to 3rd and 4th abdominal tergites and these very faint . . . . *gelechidiphagus*, n. sp.

(*b*) Abdomen immaculate.

(1) Abdomen flattish, shining and melleous in colour. 2nd cubital cell smaller than first . . . . *melleus*, n. sp.
(2) Abdomen ovoid, shagreened and reddish yellow in colour. 2nd cubital cell not smaller than first . . . . . *incarnatus*, n. sp.

CHELONOGASTRA, Ashmead.

Chelonogastra, Ashmead. p. 139. *Proc. U. S. Nat. Mus.*, XXIII, 1900.
Philomacroploea, Cameron p. 87. *Spol. Zeyl.*, III, 1905

A comparison of the original descriptions of both Ashmead and Cameron leaves hardly any room to doubt that they refer to the same genus, the characteristic features of which appear more or less unique for a Vipionine wasp. Evidently Cameron was unaware of Ashmead's genus. The small and stout built body, the short broad oval abdomen with the posterior segments more or less bent or telescoped showing only the first two or three tergites prominently give it a chelonine appearance. The deep median incision at the hind margin of the sixth abdominal segment is also a special feature of the genus. Mr. Rohwer differs from this view.

Chelonogastra basimacula, Cameron. [Plate XII, fig. 3.]

Philomacroploea, basimacula, Cameron, p. 87, *Spol. Zeyl.*, III, 1905.
Philomacroploea basimacula, Cameron. Rama Krishna Ayyar, p. 263. *Report of the 5th Entomological Meeting, Pusa*, Pl. XX. 1923.

The South Indian form agrees in almost all respects with Cameron's description and habits of the Ceylonese form. The following may be added to supplement the same. In some species, the thorax is suffused with dark. In the wings, the second cubital is smaller than the first, radial very long and almost of same width throughout, and the recurrent joining first cubital some distance away from the apex. Reared from caterpillars of Danaine butterflies especially—*Euploea core*, Coimbatore. The writer has not been able to compare it with Ashmead's type of the genus, *C. kœbelei*[1], from Japan. The descriptions of three African species recently noted by Brues[2] (at any rate, the wing neuration) appear to show that the Indo-Ceylonese species is quite different, and perhaps even not congeneric with the African forms!

Chelonogastra trifasciata, n. sp.

In 1915 the writer collected a mass of small white cocoons on the leaf of the tree *Kigelia pinnata* in Bangalore. Out of this, only a few imperfect specimens were reared out. This insect appears to be very close to *C. basimacula*, but with distinct features. The most important one is the presence of three distinct dark stripes on the mesothorax, the central one the shortest of the three. General colour is testaceous brown. Head and thorax fulvo-testaceous, ocellar area dark, antennæ and legs testaceous, median segment suffused with dark. The median dorsal patch

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[1] *Proc. U. S. Nat Mus.*. XXX, p. 195, 1906.
[2] *Annals of S. African Museum*, XIX, pp. 72-76, 1924.

on proximal abdominal segment, and the third and the following segments dark. Ovipositor testaceous. Antennæ long; basal line of scutellum distinctly crenulate, propodeum carinated, parapsidal furrows distinct, the lobes with a few coarse punctures and covered with fairly long whitish pubescence. Wings long and hyaline, the neuration almost as in *basimacula*.

The above is only a provisional description to show the distinguishing features as far as possible. A more detailed account will be given when sufficient material becomes available. The insect is smaller in size than *basimacula* and quite different in colour features.

IPHIAULAX Group.

The Braconid genus *Iphiaulax* was originally erected by Forster in 1862. Since then, within the past sixty or more years it has so happened that numerous forms with many striking differences have been dumped into this one genus from all parts of the world. A reference to Szepligeti's *Genera Insectorum* Volume on the family published in 1904 shows a record of 209 species under this genus, a record that is second only to another equally confusing genus of the family, *viz*, *Bracon*. In a later paper[1] on the Braconidæ, Szepligeti has attempted to break up this heterogenous complex by erecting as many as nineteen different genera to include several insects which would otherwise have been brought under *Iphiaulax*! He has also published a synoptical key to identify them.

The Indian forms so far recorded under *Iphiaulax* number about twenty, most of them from Eastern Himalayas, Burma and Ceylon. There is not a single record from South India till now, though in the Coimbatore collection there are some which would certainly come under this category. It is the intention of the present writer if possible to make a special detailed study of the *Iphiaulax* and *Bracon* groups especially found in South India and make it the theme for a future paper on Braconidæ. Meanwhile, such forms that have been definitely identified as belonging to previously recorded species or as new ones are included in this paper.

CAMPYLONEURUS, Szepligeti.

(*Termes. Fuzet.*, XXIII, p. 51, 1900).

The main characteristics of this genus appear to be the possession of a basal area or a carina at the base of the 2nd abdominal segment, no lateral furrows on abdominal segments, the abdomen roundish or elliptical in form, and in some the basal and cubital nerves of the forewings bent or broken.

[1] *Annals of the Hungarian N. H. Museum*, IV, p. 549, 1906.

Campyloneurus ceylonicus, Cameron. [Plate XII, fig. 2.]

Bracon ceylonicus, Cameron. p. 32. *Manchester Memoirs*, XLIV, 1897.
Campyloneurus ceylonicus, Ramakrishna Ayyar. p. *Bull. Ent. Res.*, 1926.

The following additional characters may be added to supplement Cameron's description of this insect. *Female:* Vertex shining black. A narrow groove runs from the front of the anterior ocellus to the base of the antennæ. Parapsidal furrows distinct, not very deep or crenulated ; lobes smooth with sparse clothing of white pubescence. Basal line of scutellum crenulated; scutellum smooth with a few punctures, propodeum darkish brown and shining, clothed in short white hairs. Abdomen ovorhomboidal, second segment coarsely punctate reticulate, basal triangular area smooth and shining ; the following tergites coarsely punctured but not so much as the second. Wings long and fuscohyaline, the radius very long, reaching the very tip of the wings, second abscissa more than three times the first and two-thirds that of the third, stigma long, the basal portion of the cubital nerve is distinctly curved, recurrent received just before apex of first cubitus.

Male : Similar in size and colour, though the front legs are of a lighter testaceous tinge.

Habitat : Fairly common in Coimbatore as a parasite on the grub of the weevil *Alcides bubo*, a pest in the shoots of *Sesbania, Indigofera*, and *Cyamopsis*. Noted also in Bellary on the same weevil. Two specimens in the Coimbatore collection show that the insect parasitizes a borer in brinjal also.

Campyloneurus carinogastra, n. sp.

Female: Length 7·5 mm. ovipositor 6 mm.

Head and thorax of a fleshy red colour. smooth and shining ; the region of the vertex behind the ocellar region and the malar space on either side down to the level of the middle of the eyes dark in colour. Ocelli and antennæ dark, the palpi and mandibles dark brown. Prosternum and dorsal surface of metathorax dark brown. Forelegs have the coxæ red, the other joints greyish to dark brown, fore tarsi reddish brown ; hinder legs dark speckled with grey and brown. Abdomen above and ovipositor dark. Ventral side of abdomen pale whitish with dark markings ; the membraneous portion of the 1st segment appears on each dorso-lateral side as a pale whitish longitudinal patch. Wings fusco-hyaline, stigma dark with its basal portion yellow, irregular hyaline patch in first cubital and faintly along 2nd intercubitus. Head broad above almost quadrate, very smooth and shining. Face above antennæ and below ocelli distinctly excavated and shining. A narrow groove runs from front ocellus to base of antennæ. The front and mouth parts clothed in pale white pubescence, scape of antennæ stout and not quite round. Thorax smooth and shining, parapsidal grooves clear but shallow and not crenulate, basal line of scutellum crenulate, pleurae and propodeum smooth and clothed with short white pubescence. Abdomen ovorhomboidal, convex above, second and

following tergites covered with coarse irregular carinæ, mostly arranged longitudinally, in some portions the whole surface is irregularly reticulate, the second segment has a small shining smooth triangular area at base, the vertex of which is drawn posteriorly as a fine carina almost to the margin of the segment. The sides of 2nd and 3rd segments have also small shallow lateral indentations. Ovipositor longer than abdomen. Wings long and extend beyond the abdomen. Radial cell long reaching the wing apex. Second cubital longer than first, second abscissa of radius five times the length of the first and two-thirds that of the third. Cubital nerve curved at base, the recurrent nervure almost interstitial, second intercubitus almost of the same length as the first, but rather inconspicuous.

Described from two females collected in the coffee estates of Coorg (April 1913). The species does not appear to be a previously recorded one, so far as the writer knows. In many respects, it comes near *ceylonicus*, but the colouration of the head and the strong and almost reticulate carinæ on all the abdominal tergites clearly distinguish this new species from others.

Campyloneurus tricarinatus, Cameron, Var. nov. *nigra*.

(*Bracon tricarinatus*, Cameron, p. 33, *Manch. Mem.*, XLI (4), 1897.)

For want of sufficient material, the South Indian form is here considered as a variety of *tricarinatus*. The following points in the characters of this insect are added to point out the differences, and to supplement Cameron's original description of *tricarinatus*. The head has the whole vertex and its back broadly suffused with dark colour. Prothorax black. The mesothorax has the characteristic three black stripes. Median segment above and almost the whole of the petiole black. All the abdominal tergites from the 2nd uniformly black without any admixture. Second suture finely crenulate and broader at the mid dorsal line. Third and following tergites very finely rugose longitudinally, with no keel in the centre. Wings fuscohyaline almost as in *ceylonicus* and *carinogastra*. Radial cell very long and narrow at posterior end. 1st abscissa of radius not only very much shorter than 2nd and 3rd, but is shorter than either the 1st or 2nd intercubitus, stigma long and dark brown, the basal nervure not bent, the recurrent almost interstitial, 2nd intercubitus wavy, not straight.

One of the striking features which brings this form close to *tricarinatus* is the presence of the three dark stripes on the mesonotum.

Habitat : One female from Taliparamba, Malabar, September 1917.

Campyloneurus indicus, n. sp.

Female : Length 7 mm., ovipositor 3·5 mm.

General colour of body rufo-flavous, antennæ as long as body and dark, palpi fulvous, mandibles, socelli and ovipositor sheath dark brown, ovipositor reddish brown. Wings : basal half fulvous, distal half fusco-hyaline, costa and stigma black, the latter bright yellow at base. There are hyaline clouds across the 1st cubital and along the 2nd intercubitus. Legs rufo-flavous with tarsal tips dark brown. The head and often the thorax of a lighter hue than the abdomen, the latter is suffused with irregular dark patches on 2nd and 3rd tergites.

Vertex smooth and shining with a few punctures, each giving rise to a short hair. Front above antennæ slightly excavated and with a median furrow. Parapsidal grooves long and clear, but shallow and not crenulated ; lobes smooth and shining, scutellum smooth with the basal line having distinct punctures.

Propodeum smooth and pubescent with short fulvous hairs, mouth parts, face, and mesothorax also sparsely pubescent.

First abdominal segment with dorso-lateral grooves separating middle portion into an elongated triangular area which is fulvous and has a faint central carina. Second abdominal tergite very coarsely reticulate, the reticulations mostly longitudinal. There is a small smooth shining triangular area at base, the vertex of the latter is produced as a distinct carina, which extends to a little beyond middle of the segment ; on each lateral side of this area there is a faint shallow groove nearer to the anterior lateral margin of the segment. The following tergites have a rough corrugated surface and no strong longitudinal reticulations are found as in the second segment. The suturiform articulation is distinct and clearly longitudinally striated. The apical margins of 3rd, 4th and 5th with narrow transverse grooves which give the segments a more or less raised appearance at the post margin, the segmental junctions are constricted and distinct, that of the 2nd and 3rd being broader than the suturiform articulation , ovipositor slightly shorter than length of abdomen. Wing stigma long and acute posteriorly, radial very long, ovate, and very narrow posteriorly forming almost an acute angle at its junction with wing margin ; cubitus bent at the base, 2nd cubital much longer than first, recurrent almost interstitial. The first abscissa of radius very small, the 2nd more than four times and the third about six times its length ; it is also shorter than either of the two intercubitals.

Male : Similar to female, Length 5-7 mm. The abdomen (and in some the propodeum) is suffused with dark markings much more than in the female.

Habitat : Bolampatty Valley, Coimbatore (December 1919) a few males and females ; a male and another female in the Coimbatore collection collected in the Walayar forests (May 1922), Malabar, also appear to belong to this species. It is not unlikely that the position and synonymy of this insect may have to be modified later, since it belongs to a fairly large group of rufo-fulvous forms having half fulvous and half fuscous wings, the characteristic hyaline clouds on the fore wings, and the basal smooth area on the 2nd abdominal tergite.

BATHYAULAX, Szepligeti.

(p. 559, *Ann. Hung. Nat. Mus.*, V, 1906).

Bathyaulax trypœniphaga, n. sp. [Plate XIII, fig. 1.]

Female: Length 4 mm. Terebra 2·5 mm. General colour fulvo-testaceous. Head and thorax testaceous, abdomen pale fulvous, with dark patches on dorsum of segments two to four. Ocelli and antennæ dark brown, scape and first two joints of latter reddish, palpi and legs pale yellowish except the tarsal tips which are dark. Median segment with the median dorsal area narrowly dark, wings hyaline and irridescent, costa fuscous, stigma pale brown. Ovipositor dark. The dark colour in the abdomen is confined to the apical margin of the 1st abdominal segment, the mid dorsal area of the 2nd and 3rd segments broadly, and a basal triangular area on the 4th tergite. Other regions of abdomen including ventral side pale fulvous. Head transverse, vertex broad with a few isolated punctures. Parapsidal furrows of thorax long, distinct and hairy, the lobes smooth and shining; scutellum smooth and shining with the basal line crenulate and the apical region hairy. Median segment smooth and shining; along the median line is a gentle groove in which runs a fine sharp black longitudinal carina. Abdomen elongated and more or less cylindrical, convex above. First abdominal segment grooved at sides, the central raised, triangular area coarsely reticulate at apical margin. The dorsal region of the 2nd, 3rd and 4th strongly rugosely punctured and the surface is rough and reticulate. The basal smooth area in the 2nd segment is very small, a median carina like projection runs along the dorso-median line of all the segments. This carinal region is of a lighter colour and interrupts the black dorsal patches of the 2nd and 3rd tergites. The suturiform articulation is distinct and longitudinally crenulate. The second and third segments have on each dorso-lateral side a small, transversely shallow groove, not very distinct. The apical margins of all abdominal segments from the 2nd onwards show out as distinct, more or less smooth transverse bars of a lighter colour. Thorax covered with short pale white pubescence. Ovipositor longer than abdomen. Wings hyaline and irridescent; second cubital cell longer than first, radius reaches the wing apex, the first intercubitus is slanting and makes the 2nd cubital cell narrower anteriorly, first abscissa of radius shorter than the second, but almost equal to the second intercubitus; recurrent joins first cubitus some appreciable distance from its apex.

Habitat: Anantapur, South India. Parasitic on *Trypetid* maggots in the fruits of *Alangium lamarckii*, April 1914 (About half a dozen females).

Bathyaulax carpomyiae, n. sp.

Similar to *trypœniphaga* in many respects but the colouration is clearly different in this species. The dark colour on the mesothorax and the abdominal tergites of

deeper hue and more extensive and the ground colour is of a lighter hue. Head and thorax light testaceous, antennæ, ocelli and a narrow mark behind vertex dark, the central lobe of the mesothorax shows in some lights a dark median longitudinal line, the whole of the median segment above shining dark brown. Legs pale yellowish, hind tibiæ and tarsi infuscated. The dorsal area of abdominal segments 1-5 broadly black, this black colour being interrupted along the median dorsal line of segments 3-5 by a pale whitish carina like ridge ; it is not interrupted in the 2nd. The dark area on the 5th segment is confined to its basal half only. The other parts of the abdomen including the extreme apical margins narrowly of segments 2-4 and the ventral surface, of a pale whitish yellow colour. Ovipositor fuscous and hairy. Parapsidal furrows distinct, faintly punctured and hairy, lobes smooth and shining, basal line of scutellum crenulate. Median segment smooth and shining with a median longitudinal carinated groove. The abdominal segments dorsally, especially in the black area, very coarsely reticulate punctate. Abdomen in shape and size similar to *trypæniphaga*. Ovipositor long, as long as or slightly longer than abdomen. Wings and wing neuration as in the last species. Male and female similar and slightly smaller in size than the previous species.

Habitat : Coimbatore. Bred from maggots of the fly, *Carpomyia vesuviana* attacking *Zizyphus* fruits. January 1922, (Two females).

The insect described by Cameron as *Bracon itea* from Trincomali appears to be a *Bathyaulax* and from the short and incomplete description it appears to closely approach the two species described above.

SIGALPHOGASTRA, Cameron.

(p. 124, *Straits Jour. Roy. Asi. Soc.*, Vol. 39, 1903).

Sigalphogastra greeni, Cameron.

Iphiaulax greeni, Cameron. p. 83. *Spol. Zeyl.*, III, 1905.

One South Indian specimen collected at Coimbatore in February 1920 agrees with the description of Cameron's *greeni* recorded from Ceylon. It is a slender, very long insect, with the ovipositor longer than the body ; head, thorax and front four legs testaceous red, antennæ and abdomen dark, hind legs dark brown. Wings fusco-hyaline. The fourth abdominal segment in the South Indian species is smooth above and there is a fine median dorsal carina running along the third and fourth tergites.

IPOBRACON, Thomson.

This genus, originally erected by Thomson in 1892, was considered congeneric with *Iphiaulax*, Förster, by Szepligeti in 1904, but he has separated it later in 1906 [1]

[1] *Ann. Hung. Nat. Mus.*, IV, p. 549, 1906.

in his elaborate synopsis of the *Iphiaulax* complex and restored its original generic rank. The most important character, among others, by means of which he separates *Iphiaulax* from *Ipobracon* is the presence in the latter of a basal area or keel on the second abdominal segment. Enderlein in a recent paper has added [1] a supplementary generic feature *viz.*, "*Hinterrand des 3 bis 5. Abdominal tergites völlig ohne Querfurchen oder linienartigen Eindruck.*" There is no doubt that this genus is well represented all over India, and the species probably play a very important part in the natural control of many beetle pests of valuable forest trees. The following two forms which definitely belong to this genus and which do not appear to have been recorded till now are here described as new.

Ipobracon kanarensis, n. sp. [Plate XIII, fig. 2.]

Female: Length 11 mm. Ovipositor 18 mm. Head, thorax and front pair of legs reddish brown, antennæ, mandibular tips, abdomen and ovipositor sheath deep brown to black, ovipositor brown. The four hind legs dark brown with the trochanters having reddish tinge. Propodeum dark brown. Ventral side of abdomen and the membraneous dorso-lateral edges of first segment pale yellowish with black markings in the former. Wings fusco hyaline, costa and stigma dark brown, the latter with an elongated fulvous mark at base, across the first cubital cell is a faint hyaline streak.

Head transverse-cubital, as broad as mesothorax, antennæ with the scape long, stout, cylindrical and hairy ; it has also a coarsely punctured surface. Ocelli placed on a slightly raised area ; few punctures between the ocelli ; the front excavated below this region and the face excepting the median area which is more or less smooth and shining, closely punctured and pubescent. Vertex smooth and shining with a few isolated punctures. Eyes large. Thorax smooth and shining, parapsidal grooves distinct and smooth, central lobe of mesonotum prominent, smooth ; scutellum smooth with the basal line punctured and the apex hairy. Propodeum smooth with a few isolated punctures each giving rise to a hair. Metapleuræ hairy. Abdomen elongated and more or less lancet shaped, first segment long. There are two longitudinal carinæ along the mid-dorsal area enclosing a central elongated space which is irregularly crenulated ; each lateral margin is also raised into a long sharp carina. The dorsum of second segment very strongly carinated and reticulated. The basal triangular area is longitudinally striated and the two sides form prominent longitudinal carinæ which meet at the apex of the triangle and whence a sharp carina extends to the apex of the segment. The area bordering this triangular space in the 2nd segment is very strongly carinated and reticulate mostly with longitudinal carinæ and some ridges running sideways. The anterior dorsolateral margin on each side of the segment is slightly foveated, smooth and shining. The dorsal surfaces of 3rd and 4th segments have numerous fine longitudinal carinæ

[1] *Zur. Kenn. Ausser. Europ. Bracon.* (*Arch., Naturg*. 1918) (Publ., 1920.) P. 71.

and do not have the coarsely reticulate appearance of the second segment; the antero-lateral corners of these two segments are also smooth and slightly foveated. The sutures between the 2nd and 3rd and the 3rd and the 4th segments distinct and crenulate. The posterior segment smooth. The extreme apical margins of segments 3-5 appear slightly raised, especially at the mid-dorsal area, and more or less transversely smooth. Ovipositor longer than body. Wings long, radial cell very long reaching apex of wing, first abscissa is short, one sixth of the second abscissa and about one ninth of the third. It is less than half the length of either of the two intercubitals. The 1st of the latter is slightly longer than the 2nd which latter is also curved in the middle, not straight; the recurrent joins the first cubital just before its apex; the latter is bent (arched) outwards basally.

Habitat: Wandsei forests, South Kanara District. Collected hovering about logs of recently cut timber, September 1913. Described from half a dozen females.

Ipobracon dentiscapa, n. sp.

Female: length 8 mm. ovipositor 11 mm.

Head flavo-testaceous, the vertex above and the front downwards up to the level of the antennæ dark, base of antennæ reddish, ocelli dark brown, prothorax and front legs flavo-testaceous with the bases of the femora and tibia of the latter infuscated. Antennæ, mesothorax, hinder four legs, abdomen above and ovipositor dark brown to black. Vertex and thorax with shining white pubescence. Mesopleuræ tinged with testaceous. Wings fusco-hyaline, stigma fulvous at base beyond that dark brown, veins dark brown. Ventral side of abdomen yellowish white with black markings.

Head quadrate cubical, vertex broad and shining with a few punctures each giving rise to a hair. The front from the ocellar region to the base of antennæ broadly excavated and smooth with the region on both sides of this pit punctured. The scape of the antenna is well developed and strong, the basal portion is constricted and appears as a separate cylindrical joint, the body of scape stout and more or less broadened distally where it has two tooth-like tubercles. Scape punctured and hairy. There is a median narrow groove from base of antennæ to clypeus which is slightly depressed, the face smooth and lightly pubescent. Malar regions broad and smooth.

The whole thorax is fringed with short white pubescence, central lobe of mesonotum smooth and shining, parapsidal furrow not crenulated, basal line of scutellum crenulated, median segment smooth and pubescent. Abdomen elongated. First abdominal segment longer than broad, lateral margins raised as sharp carina, central area coarsely rugose, base of 2nd segment with the triangular area enclosing a sharp carina, the sides of the triangle meet just beyond half of the segment and meet the apex as a single carina, the borders of the triangle on each side coarsely reticulate; each of the antero-lateral angles with a shining smooth area. 3rd and

4th segments closely and irregularly longitudinally striated, antero dorsal angles of 3rd also with smooth shining area ; 5th tergite smooth. .Ovipositor long, longer than body. Wings fusco-hyaline, veins as in the last species, the cubital arched at base, the first abscissa of radius very short and radius very long.

Habitat : Shevaroys, Salem Dt., April 1913. Parasitic on the grubs of a weevil, *Acicnemis* sp., on bark of dead wood. From half a dozen specimens.

The insect resembles in most respects *kanarensis* but can be distinguished by the different colouration of the head and thorax, and the structure of the antennal scape. Both are evidently beetle parasites.

IPHIAULAX, Forster.

According to the latest diagnosis of Szepligeti, this genus includes forms which have the following important characters. " No basal area or keel on the 2nd abdominal segment. Abdomen roundish or trilateral, not longer than head and thorax but broader than the thorax, second half as long as broad." Only those which the author has been able to definitely make out as new or recorded ones are included here.

Iphiaulax elizeus, Cameron.

(p. 107, *Entomologist,* 1905.)

Habitat : Salem (January 1916), one female specimen. It agrees in almost all characters with Cameron's description of the species recorded from Deesa, Bombay Presidency. The only important difference is that in the South Indian forms it is not the apical abdominal segment above that is black in colour but the whole posterior region of abdomen from the 4th segment inclusive. A few characters not noted by Cameron may be added here to supplement his description. A distinct longitudinal groove along propleura. Mesothorax smooth and shining, the furrows faint. Antennæ long. Vertex of head broad and smooth, scutellum and propodeum smooth ; the latter clothed with short white hairs. The central area of 1st abdominal segment raised and finely longitudinally striated, anterior lateral angles of 2nd, 3rd and 4th tergites with a shallow groove. 2nd and 3rd sutures distinct and the former distinctly crenulate, the apical margins of 3rd, 4th and 5th segments have a narrow transverse groove along the whole breadth of the abdomen.

This may be regarded for the present as a colour variety of Cameron's *elizeus.*

Iphiaulax spilocephalus, Cameron.

(p. 584, *B. J.* XVIII, 1907.)

Habitat : Coimbatore, in *cholam* and maize fields; a fairly common species, evidently a parasite on borers, but not bred out from any borers so far. The

South Indian forms agree with Cameron's description of the species first recorded from Deesa. The males have the abdomen broader than that of the female. The antennæ in both are very long, that of the male has a brownish tinge; 3rd, 4th and 5th abdominal tergites have the extreme apical margins transversely grooved. The face above the antennæ excavated with a narrow median groove running from ocellar region to bases of antennæ. In the wings, 1st and 2nd cubital cells almost equal. 1st abscissa of cubital slightly longer than 2nd, recurrent interstitial; a hyaline streak is present along the 2nd transverse cubitus. In the abdomen the central raised area of 1st segment as in *elizeus*, the 3rd segment is not quite clearly longitudinally striated, though both the sutures show the striæ distinctly. One specimen from Kallar (Nilgiris), October 1917, has a flavous colour with the antennæ deep brown, the yellow streak along inner margin of eyes clear and the extreme base of the antennæ above is also yellowish. The abdomen is short and stout with the apical transverse furrows deep and very prominent. The 2nd cubital cell is slightly longer than the 1st. In other respects it agrees with the Coimbatore forms.

Iphiaulax stramineus, Cameron.

(p. 172, *A. M. N. H.* XIX, 1907.)

Habitat: Yercaud, Shevaroy hills, April 1913. One female caught on the wing. The insect agrees in all respects with Cameron's description of the type of the species recorded from Tennaserim.

The three species of *Iphiaulax* noted above might be brought under Szepligeti's genus *Hybogaster* (*a*) in his *Iphiaulax* group, due to the comb-like striation of the central elevated area of the first abdominal segment.

Iphiaulax spilocephaliformis, n. sp. [Plate XIV, fig. 1.]

In general form and colouration, this insect is similar to *I. spilocephalus*, C. It may be distinguished, however, by the following important features. The ovipositor in the female is longer than the abdomen and slender in this species, while in *spilocephalus* it is shorter and stouter with the sheaths broader distally. The first abdominal segment has a distinct median longitudinal keel along the raised triangular median area and the 2nd segment has a distinct smooth triangular area at the middle of its base with the apex of this triangle drawn back as a distinct keel almost to the apical margins of the segment; this important feature of the 2nd segment is absent in the other species. In *spilocephalus*, excepting the sutures between the segments which are longitudinally striated, the dorsal area of the segments 2-5 inclusive is closely punctured and it is only on the 2nd segment, espec-

ially at the base, that the punctures are more or less drawn out into irregular long striæ. In this new species the dorsal surface of 5th segment is smooth, those of the other segments 2-4 inclusive have longitudinal striæ, more pronounced on the 2nd segment on both sides of the central area and median keel; in addition, the apical margins of 3rd and 4th have distinct longitudinally striated transverse grooves. In the wings of this species the base of the cubital nerve is distinctly curved, the 2nd cubital cell is broad and has the sides almost parallel, unlike as in *spilocephalus* which has the first transverse cubital distinctly slanting, thus making the anterior side of the cell narrower; the 2nd cubital cell is also bigger and slightly longer than the 1st in this new form. While the narrow median groove in front of the head is distinctly seen in *spilocephalus*, it does not extend below the bases of the antennæ in this new form. The scape of the antenna in this latter is also slightly different in structure. It is stout, and tuberculated at the distal end near its junction with the flagellum, and the tubercle is clearly seen projecting on the ventral side, particularly so in the male. The general colouration of the body and wings similar in both. This new species appears to be slightly bigger in size. *Female* 14 mm. and ovipositor 11 mm.

Habitat: collected from Coimbatore, Salem and Bellary; appears to be fairly common. Food habits not known.

Besides the species definitely described above, the Coimbatore collection contains three or four distinct forms which, so far as the writer could make out, do not exactly correspond with the descriptions of any of the previous Indian and Ceylonese records of Cameron, and some of them have been returned from the British Museum unidentified. They are very probably new species, but still the writer hesitates to describe these forms as new ones for the present, since it is likely that some at least of these forms possessing a basal carina, a smooth area, or both on the 2nd abdominal segment are likely to be separated from *Iphiaulax* and brought under other or new genera like *Campyloneurus*, Sz. *Monogonogastra*, Vier etc. For the present, therefore, the writer prefers to merely point out the main distinguishing features of these forms. All except the fourth are of medium size and are rufous or flavo luteus in colour with slight variations in wing colouration.

I. 2nd abdominal segment with a strong median keel very slightly broadened at the base and extending a little beyond middle of segment.

(*a*) Body luteus, wings flavo-hyaline with the tips slightly smoky and having the base of 1st cubital and tip of stigma dark. (Specimens from Coimbatore, N. Arcot, Madura, Tinnevelly).

(*b*) The wings flavous yellow basally, fuscous hyaline beyond, with a hyaline cloud running across wing from base of stigma to the junction of the recurrent with cubital. (Coimbatore, Salem, Mysore.)

II. (*a*) 2nd abdominal segment with a smooth triangular area at base, the apex of the triangle extending as a fine median carina up to middle of segment. (Ganjam,

Mysore, Coorg, Malabar, Salem and Coimbatore.) This form more or less approaches Cameron's *Bracon pauperatus* [1] from Khasia Hills.

(*b*) The triangular space very smooth and flavous with no keel from apex, antennæ greyish brown, posterior segments from the 3rd and the hind tarsi dark brown in colour. (One female from Coimbatore.)

Iphioilta, gen. nov. [Plate XIV, fig. 2.]

This new genus is erected to include a Vipionine wasp which possesses many features of Cameron's *Chaoilta* and Thomson's *Iphiaulax*, but shows striking differences from both. In the structure of the head, the prothorax, prosternum, hind legs, the second cubital cell of fore wing, the tuberculate base of the antennæ and the comparatively small eyes it agrees with *Chaoilta*. The broad ovoid shape of the abdomen which is broader than the thorax, and the characteristic oblique furrows and anterolateral corner plates of the abdominal segments give the insect the look of an *Iphiaulax*. It differs from *Chaoilta* chiefly in the absence of the frontal carinated plate below the antennæ and the prominent teeth on the scape of the latter, but instead, there is a rudimentary and rough outline of a plate like projection in front of the antenna and the scape is tuberculated instead of being toothed. From *Iphiaulax* it differs in the large size and shape of head, the structure of the antennal scape, the structure of the prothorax, and in the size of the second cubital cell in the wing. The other features are noted in the description of the species below.

Type : *I. malabarica*, n. sp.

Iphioilta malabarica, nov. sp.

Female : length 16 mm. ovipositor 15 mm.

Head and thorax flavous, abdomen rufo-flavous, legs flavous, antennæ except extreme tip which is slightly rufous, tip of mandible, space between ocelli, and ovipositor sheaths dark; ovipositor brown. Wings : basal half bright flavous, distal half fuscous, with a flavo-hyaline cloud running from stigma across first cubital to the junction of the recurrent nerve with first cubital ; more than half the stigma from base flavous, apex dark.

Head very well developed, almost quadrate above, vertex very spacious and the malar space on each side broad. Eyes comparatively small. Face between ocellar region and base of antennæ slightly depressed, bases of antennæ tuberculate; the scape is strong and cylindrical and has a distinct tubercle distally at its junction with the flagellum. The front below antennæ shows the rudiment of a thin plate on the surface. The clypeal region is shagreened. The vertex and malar space very smooth and shining. Palpi and lower regions of face with short fulvous hairs.

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[1] p. 83, *Manch. Mem ciis*, XLIV (15), 1900.

Thorax long and ovoid and more or less flattish. Prothorax has the characteristic central incision on the basal lobe. Parapsidal furrows not very clear, scutellum and median segment smooth and shining, the latter clothed with fulvous hairs at the sides. Legs stout, femora slightly swollen at apex. Abdomen broadly ovoid, not longer than head and thorax; first segment longer than broad, deeply grooved along each side, the central triangular area is finely longitudinally striated and is fulvous in colour. The 2nd, 3rd and 4th segments are broader than long, with the dorsal surface of all finely longitudinally striate. At the centre of the base of the 2nd segment is a triangular area of a lighter colour, enclosing very fine longitudinal striæ. From each side of the base of this area runs a striated lateral groove separating the anterolateral margins of the segment; the base of the 2nd segment on each side of the basal area is very smooth and shining but the extreme anterolateral corners are coarse and pubescent. A similar pair of lateral grooves are found on the 3rd and 4th segments also, but are not so very distinct. The suturiform articulation is distinct and striated. The apical margins of 3rd and 4th segments have striated transverse grooves. The posterior segments are smooth. Ovipositor long, almost as long as the body, but not broad or hairy. Wings are well developed, the 2nd cubital cell is as big as the 3rd, recurrent nervure meets first cubital at some distance from its apex; the 2nd and 3rd abscissæ of the radius are almost equal in length, the third slightly longer.

Habitat: One female, Taliparamba, Malabar, September 1918.

This insect is a well built and fairly large wasp. The writer has only perused the description of Cameron's type, *viz. C. lamellata,* but has not seen the insect. However, he has seen two other species of *Chaoilta* described by Cameron himself from the Malay Archipelago, *viz. C. ruficeps* and *C. laticauda.* In all these three, the 2nd cubital cell is longer than the 3rd and the ovipositor sheaths of both the Malayan forms are broad and densely pilose. Cameron does not mention anything about the ovipositor of *lamellata.* In all these three, the abdomen is comparatively longer than in *malabarica.*

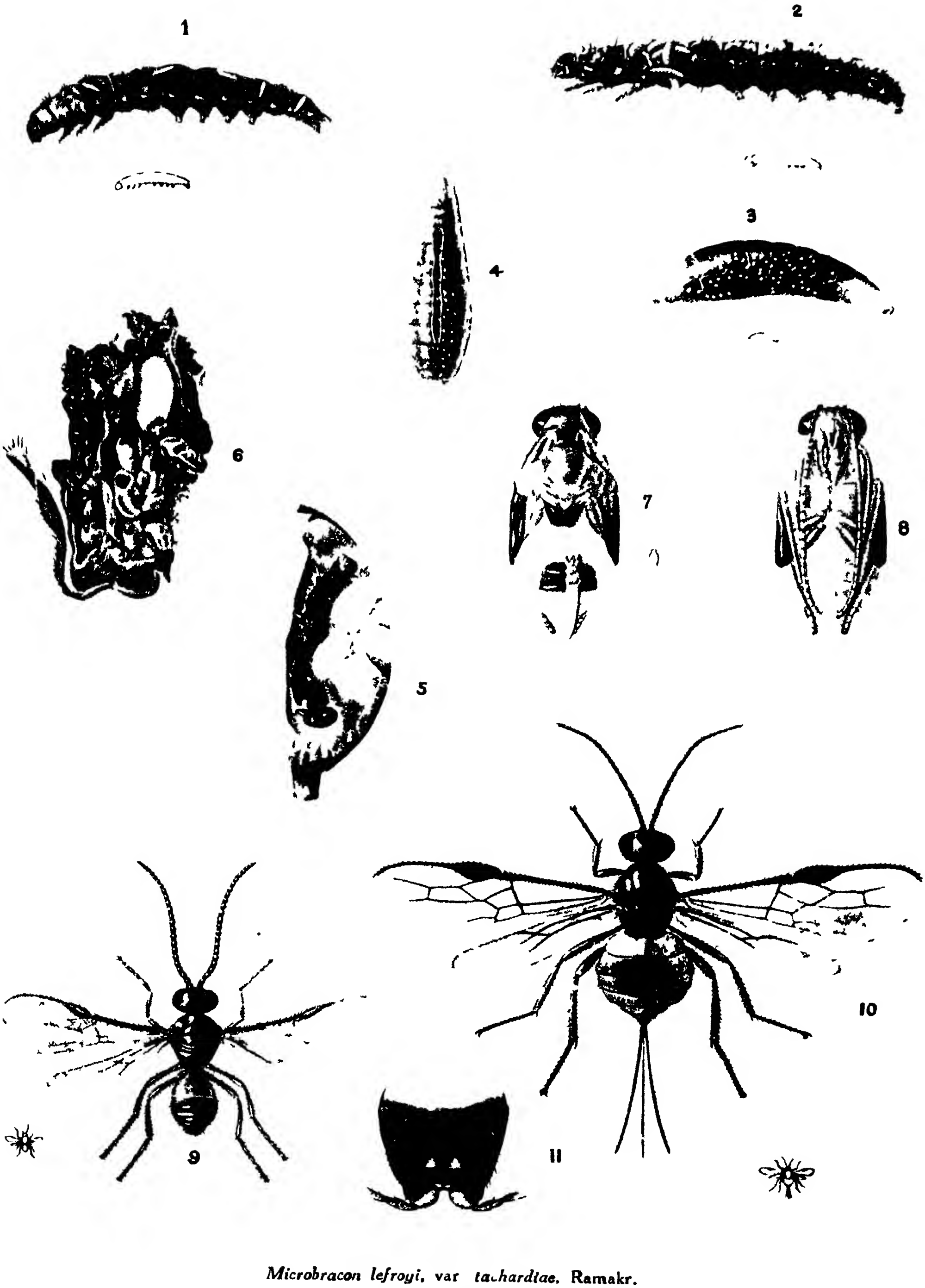
GENERA AND SPECIES NOTED IN THIS PAPER.

1. *Vipio smenus*, Cameron.
2. *Vipio gracilis*, n. sp.
3. *Stenobracon nicevillei*, Bingham.
4. *Stenobracon deesae*, Cameron.
5. *Stenobracon frontomaculatus*, n. sp.
6. *Aphrastobracon flavipennis*. Ashmead.
7. *Aphrastobracon maculipennis*, Ramakrishna.
8. *Aphrastobracon alcidiphagus*, n. sp.
9. *Tropobracon luteus*, Cameron, var. nov. *indica*.
10. *Eutropobracon indicus* gen. et. sp. nov.
11. *Microbracon lefroyi*, Dud. & Gough, var. lefroyi.
12. *Microbracon lefroyi* var *tachardiae*.
13. *Microbracon gelechidiphagus*, n. sp.
14. *Microbracon incarnatus*, n. sp.
15. *Microbracon melleus*. n. sp.
16. *Microbracon pictus*, n. sp.
17. *Microbracon chilocida*, n. sp.
18. *Chelonogastra basimacula*, Cameron.
19. *Chelonogastra trifasciata*, n. sp.
20. *Campyloneurus ceylonicus*, Cameron.
21. *Campyloneurus carinogastra*, n. sp.
22. *Campyloneurus indica*, n. sp.
23. *Campyloneurus tricarinatus*, Cam., var. n. *nigra*.
24. *Bathyaulax trypaeniphaga*, n. sp.
25. *Bathyaulax carpomyiae*. s. sp.
26. *Sigalphogastra greeni*, Cameron.
27. *Ipobracon kanarensis*, n. sp.
28. *Ipobracon dentiscapa*, n. sp.
29. *Iphiaulax elizeus*, Cameron.
30. *Iphiaulax spilocephalus*, Cameron.
31. *Iphiaulax stramineus*, Cameron.
32. *Iphiaulax spilocephaliformis*, n. sp.
33. *Iphioilta malabarica*, gen. and sp. nov.

EXPLANATION OF PLATE V.

Microbracon lefroyi, var. *tachardiae*, Ramakr.

1. Eggs laid singly on a caterpillar, 2. Young larvae feeding on the body of a caterpillar, 3. A full grown larva, side view, 4. A nearly full grown larva, dorsal view, 5. Cocoons, 6. Cocoons from which the adults have emerged, 7. Pupa of a female. dorsal view, 8. Pupa, ventral view, 9. Adult male, 10. Adult female, 11. Middle part of thorax (meso-sternum) of female, ventral view. All figures are magnified. The outline sketches show the natural sizes.



Microbracon lefroyi, var *tachardiae*, Ramakr.

PLATE VI.

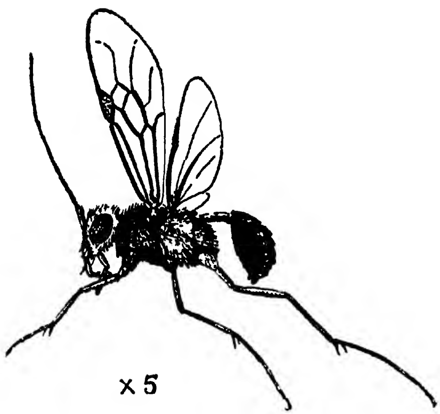


Fig 1. EVANIAD (Evania).

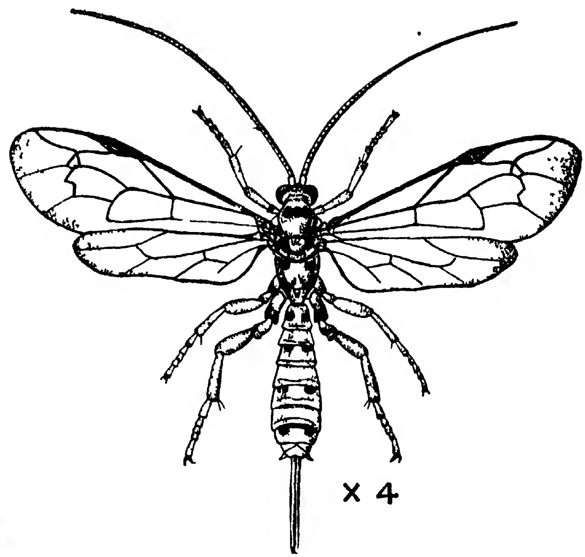
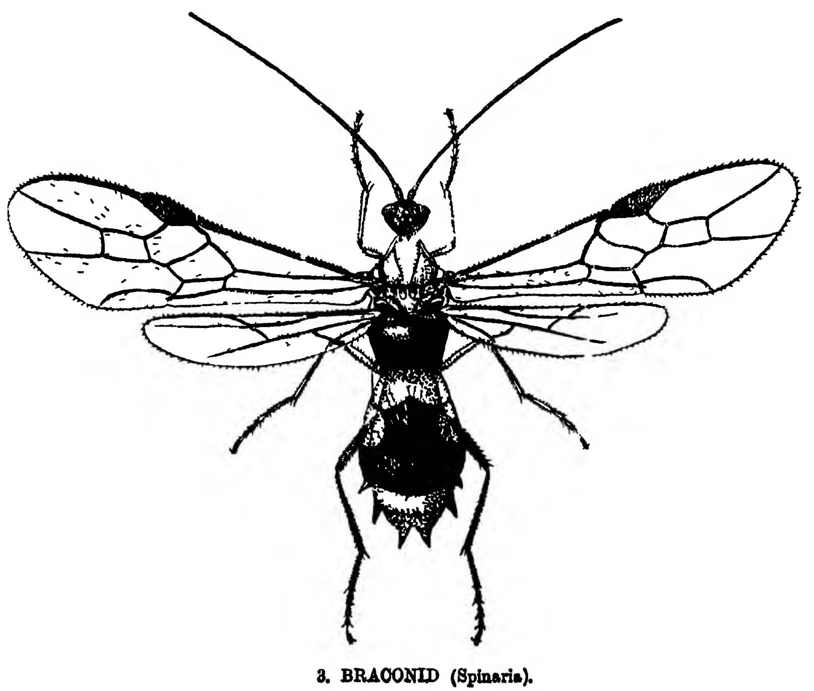


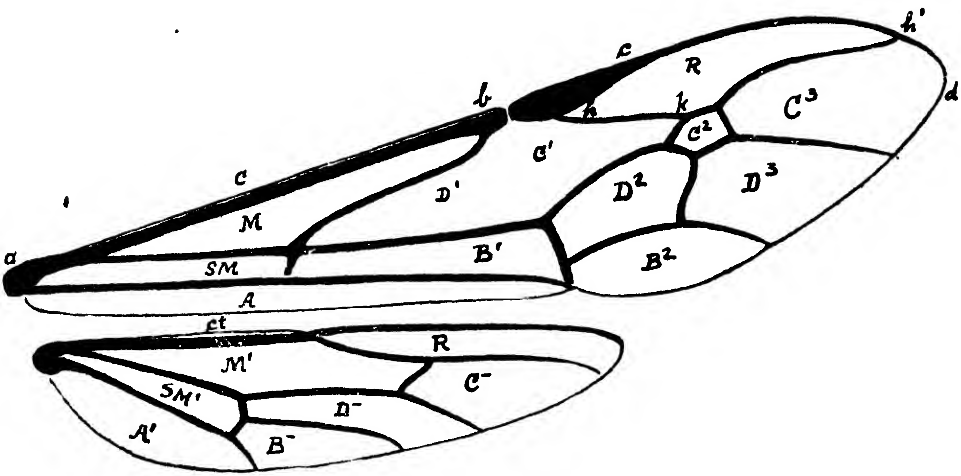
Fig 2. ICHNEUMONID (Xanthopimpla)



3. BRACONID (Spinaria).

PLATE VII.

Ichneumonid (Labena).



1. Braconid (Helcon).

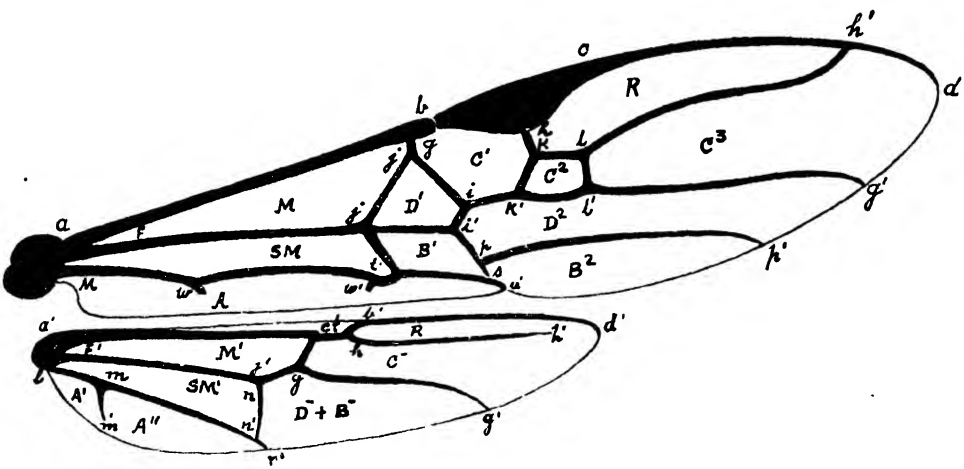


Fig. 2. Wing neuration of ICHNEUMONID and BRACONID types.

Cells: C-Costal. R-Radial (marginal). M-Median. D^1 D^2 D^3-Discoidals. C^1 C^2 C^3-Cubitals. S M-Submedian. S M^1-Submediellan. M^1-Mediellan. ct-Costellan. (D^1 & B^1-1st and 2nd Discoidals of authors). B^1 B^2-Brachials. (B^2-Apical of authors). A-Anal. $\bar{C}$ -Cubitellan. $\bar{D}$ -Discoidellan. $\bar{B}$ -Brachiellan. A′ A″-Anellan.

Nervures: ab-Costa. bc-stigma. hkh^1-radius. gig^1-cubitus. fj^1-medius j′r′s-discoideus. pp-subdiscoidus. uwt′-submedius. t′ u′-brachius. jj′-basal. kk′-1st intercubitus. ll′-2nd intercubitus. ii′-recurrent. j′ t′-nervulus (transmedian). a′ b′-subcostella. f′ j′-mediella. lmn′-submediella. hh′-radiella. gg′ cubitella. nn-nervellus. ch′ d-metacarpus. b′ d′-metacarpella. n′ r′-brachiella. mm′-interanella.

(From "Horismology of the Hymenopterous Wing" by Rohwer and Gahan. *Proc. Ent. Soc. Washington*, Vol. XVIII, p. 74. 1916).

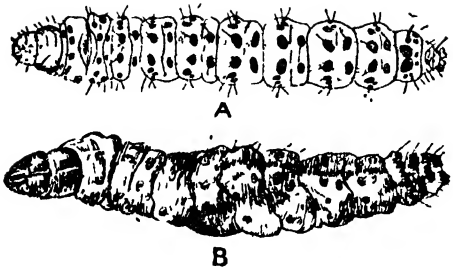


Fig. 1 (A) Healthy and (B) parasitised caterpillar of *Diatræa* in cane. Parasitised by *Apanteles*.

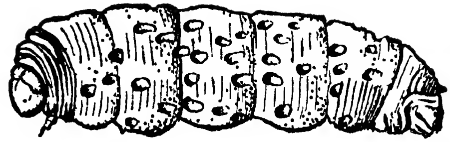


Fig. 2. Caterpillar of Nerium sphinx parasitised by Braconid.

Fig. 3. Cocoons of *Apanteles* on *Stauropus*

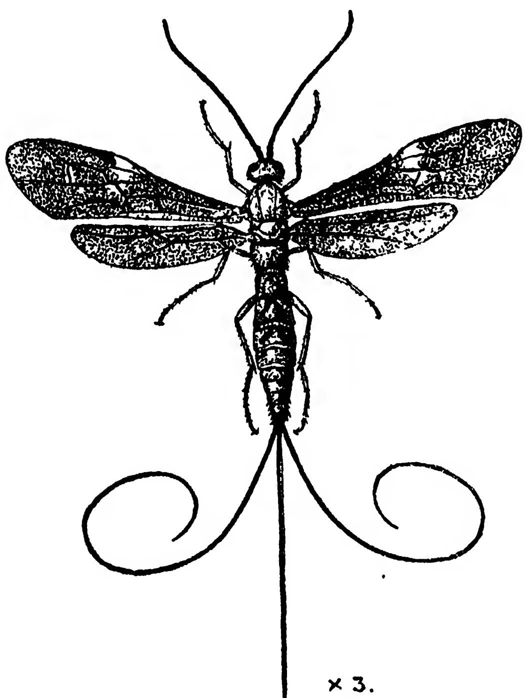


Fig. 4. ***Vipio smenus,*** **Cam.**

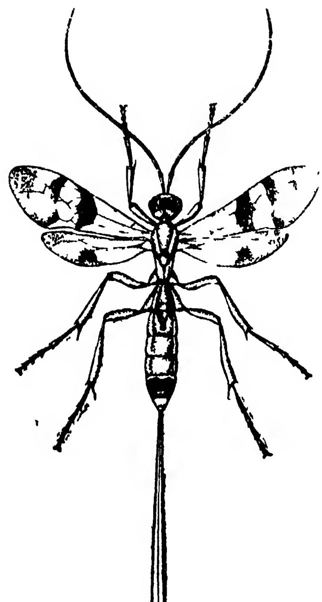
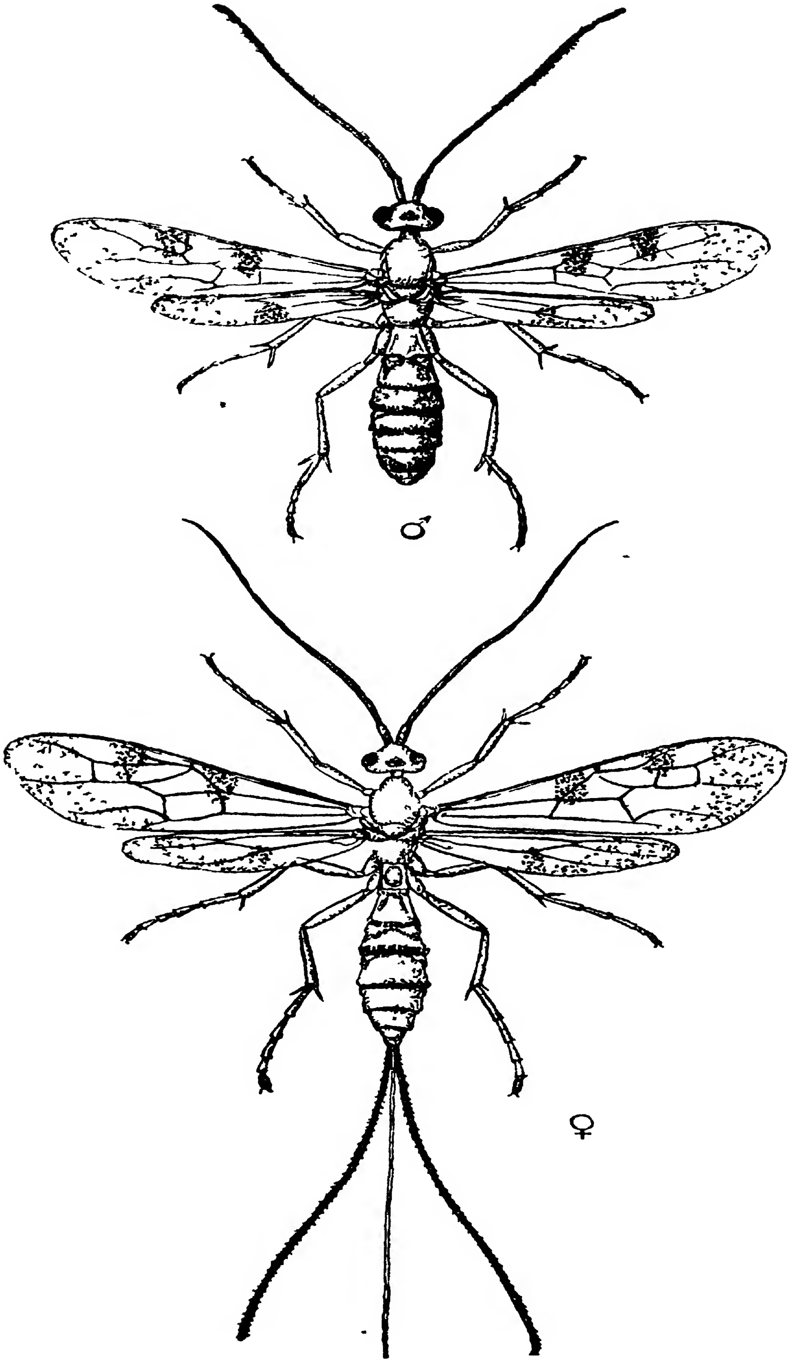
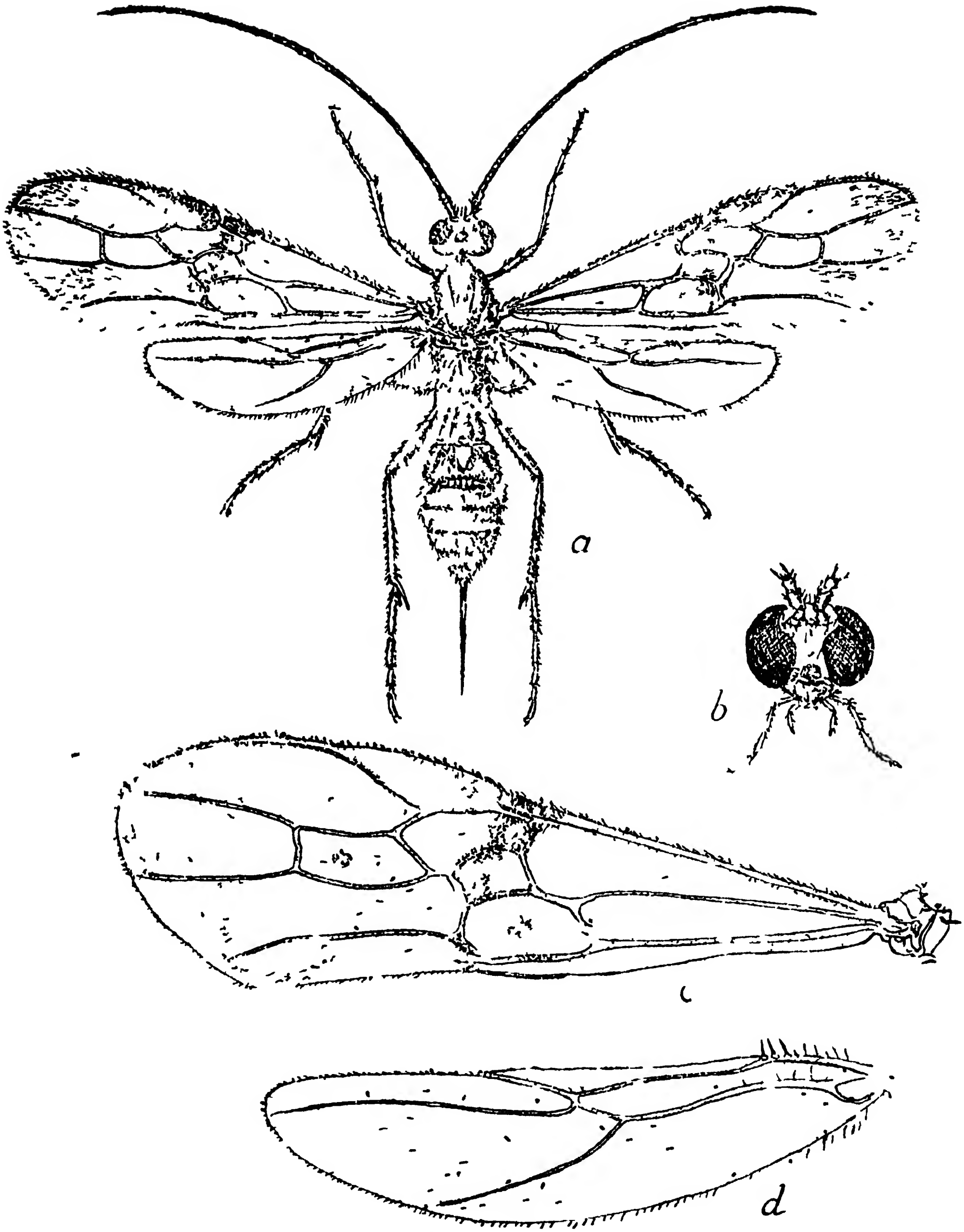


Fig. 5 ***Stenobracon nicevillei,*** Bingham
Female × 2

PLATE IX.



Stenobracon deesae Cam. par. on *Chilo* in *Cholam*
(Magnified about 3 diameters).



Aphrastobracon maculipennis **Ramakrishna : *a*, female ; *b*, head , (*c*) fore wing ; (*d*) hind wing.**

PLATE XI.

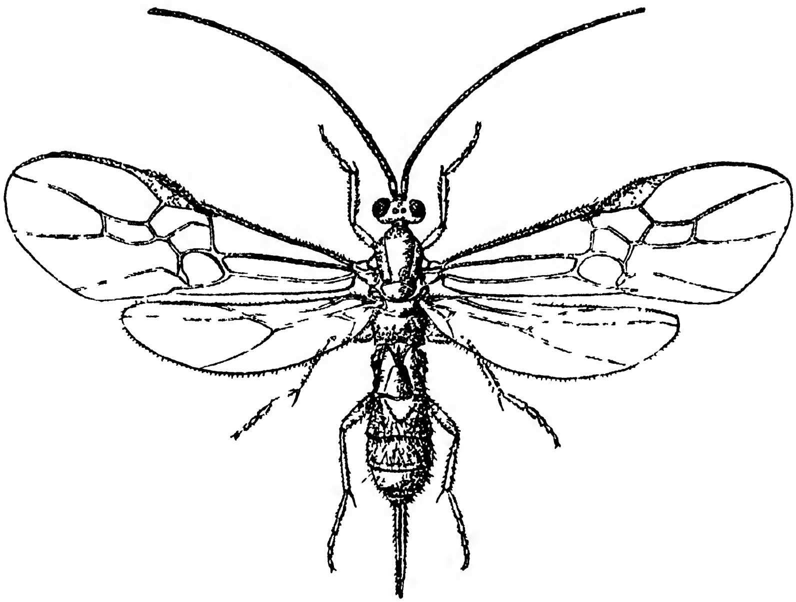
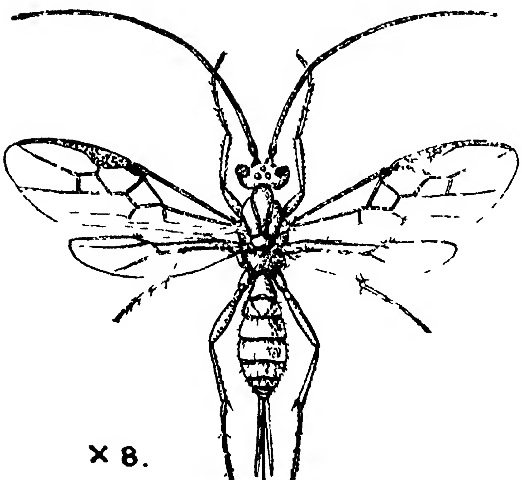
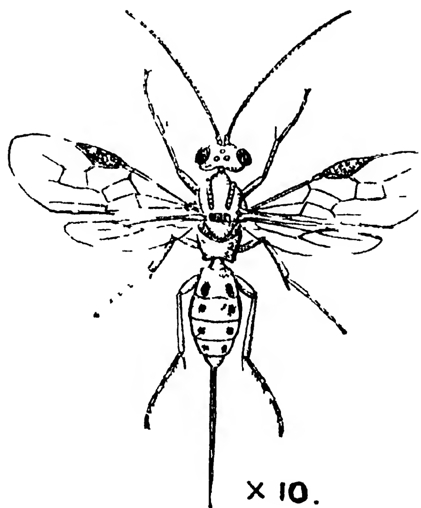


Fig. 1. *Aphrastobracon flavipennis*, Ash.



× 8.

Fig. 2. *Tropobracon luteus* var. n, *indica*.



× 10.

Fig. 3. *Eutropobracon indicus*, n.g. and sp.

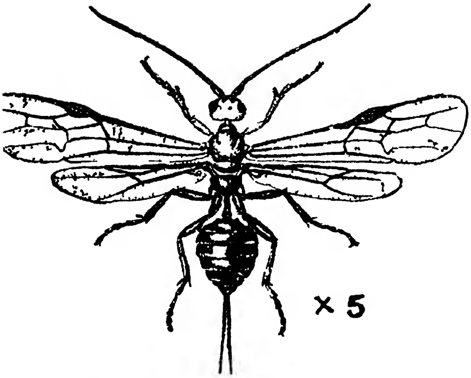


Fig. 1. *Microbracon chilocida*, n. sp.

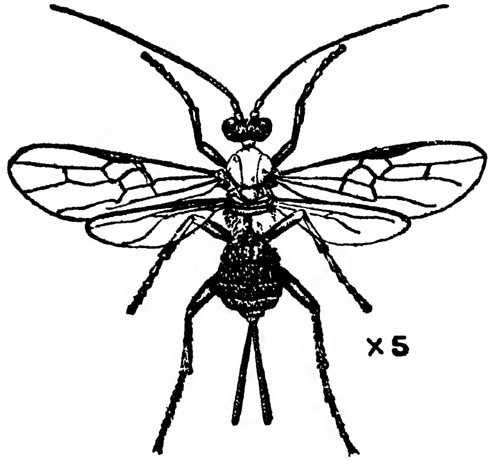
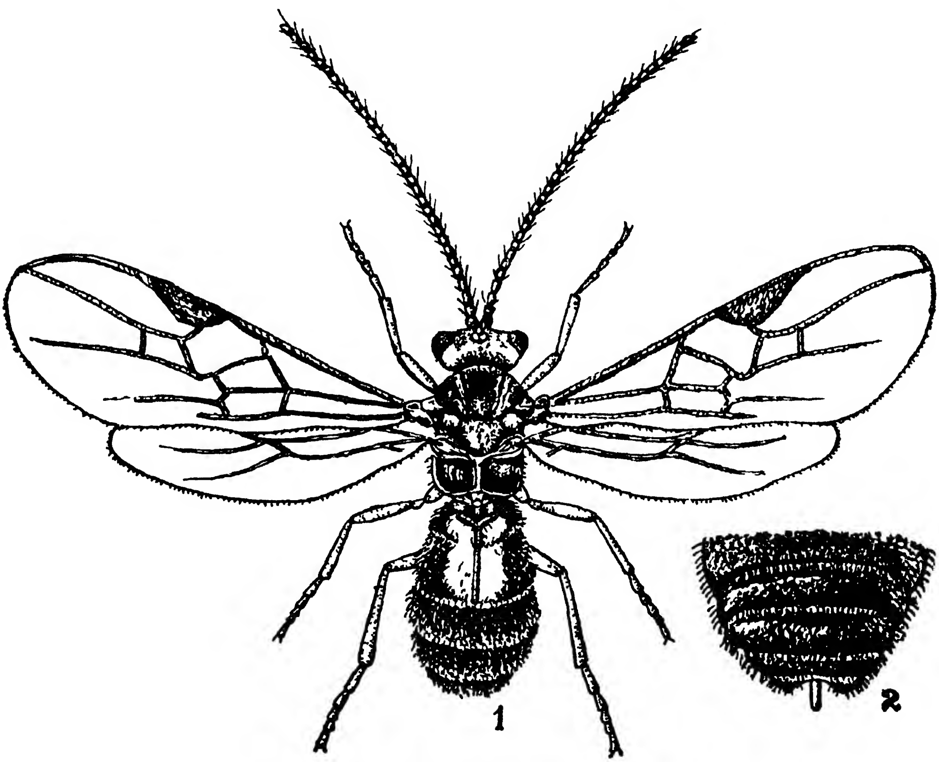


Fig. 2. *Campyloneurus ceylonicus*, Cameron.



3. *Chelonogastra basimacula*, Cam.
1, the adult insect, magnified about 12 diameters, 2, anal invagination, more highly magnified.

PLATE XIII.

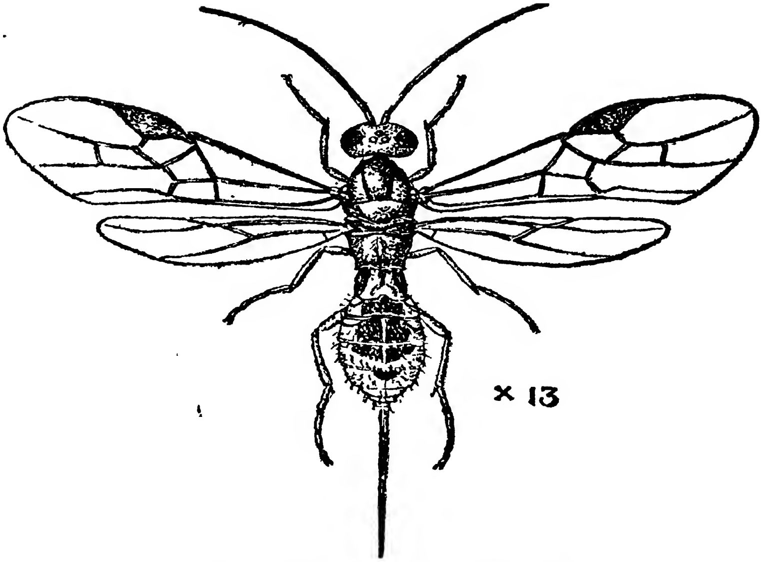


Fig. 1. *Bathyaulax trypaeniphaga*, n. sp.

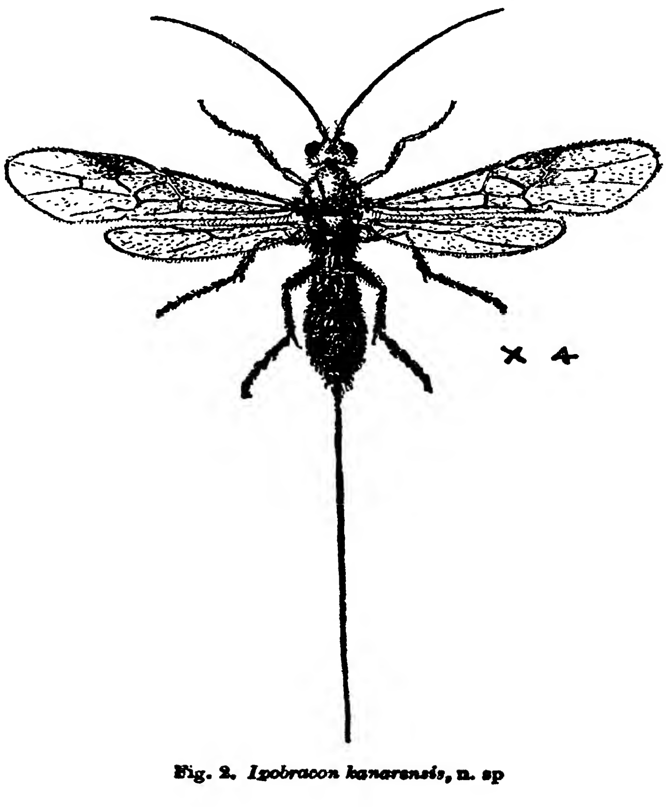


Fig. 2. *Ipobracon kanarensis*, n. sp

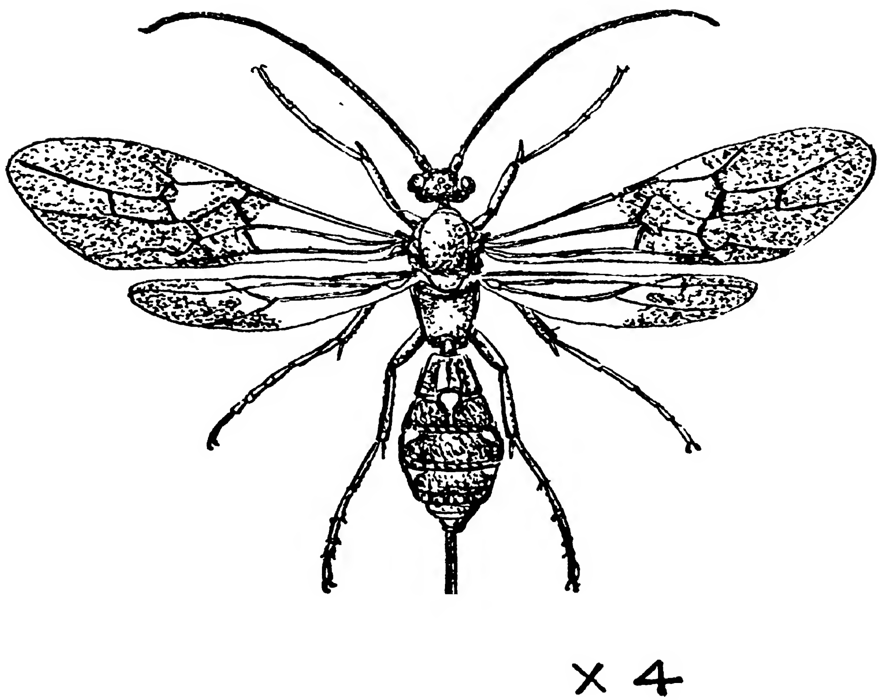


Fig. 1. *Iphiaulax spilocephaliformis*, n. sp.

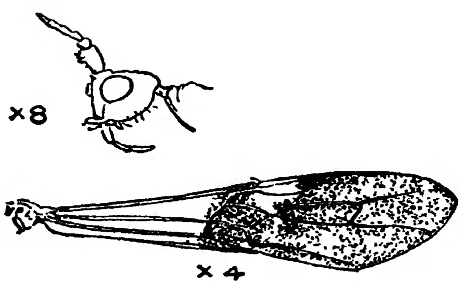


Fig. 2. *Iphioilta malabarica*, new g. and sp.
Side view of head and forewing.

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Manager, Newal Kishore Press, Lucknow.
The Upper India Publishing House, Ltd, 41, Aminabad Park, Lucknow.
Rai Sahib M. Gulab Singh & Sons, Mufid-i-Am Press, Lahore and Allahabad.
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Manager of the Imperial Book Depôt, 63, Chandney Chawk Street, Delhi.
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The Srivilliputtur Co-operative Trading Union, Ltd., Srivilliputtur (Satur S. I. R.).
Raghunath Prasad & Sons, Patna City.
Dandekar Brothers, Indore City.
The Hyderabad Book Depot, Chaderghat, Hyderabad (Deccan).

The fifteen new species of Miridæ described in this paper are all from Southern India with the exception of *Armachanus pusa*, which is from Pusa (Bihar), and of *Hyalopeplus Krishna*, which is from Chapra (Bihar) I wish to thank Dr. G. A. K. Marshall, of the Imperial Bureau of Entomology, and Dr. P. B. Uvarov for the assistance given me at the British Museum, and Dr. Bergroth and Mr. H. H. Knight of St. Paul, Minnesota for supplying me with literature.

E Ballard.

SOME NEW INDIAN MIRIDÆ (CAPSIDÆ).

BY

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(Received for publication on 3rd January 1927.)

Sub-Family MIRINAE.

Division Capsaria, Reut.

Deraeocoris maculatus, n. sp. (Pl. XV, fig. 1).

Ochraceous, eyes black, first antennal joint subapically and subbasally annulated fuscous. Second joint dark fuscous, apex pale ochraceous, base of third joint pale ochraceous, remainder of joint fuscous Anterior callosities confluent and partially fuscous. Irregular fuscous marking in the centre of the pronotum spreading to the posterior margin. Scutellum dark fuscous, basal angles, apex and lateral margins pale ochraceous. In some specimens there is a pale ochraceous longitudinal stripe. Membrane hyaline, cell margins fuscous, apex of cuneus fuscous. Clavus and corium punctate fuscous. Legs pale ochraceous annulated fuscous. Space between the eyes broad, more than ⅔ length of anterior margin of the pronotum. Length 4 mm.

Dr. P. B. Uvarov compared this species with the type of *C. lutulentus* and I have since checked it myself. The pronotum is longer and more convex. *C. maculatus* resembles *C. lutulentus* var. (*Fauna of India*, Rhynchota II, p. 461). A variation of *maculatus* is very dark, especially on the pronotum.

Habitat: Chikballapur, Mysore (*T. V. Campbell*): Taliparamba, North Malabar (*P. Susainathan*): Salem, South India, on mango leaves (*P. V. Isaac*).

Type in the British Museum.

Deraeocoris indicus, n. sp. (Pl. XV, fig. 2).

Near *C. signatus*, Dist.

It differs mainly in that the head between the eyes is distinctly broader than in *signatus* and is smooth. The space between the eyes is nearly equal to the anterior margin of the pronotum.

Ochraceous · apex of the second joint of the antennæ dark fuscous, apex of first, third and fourth joints fuscous: eyes black: central longitudinal fascia of the

scutellum, incisural margins of the clavus and margins of the cells fuscous: membrane sub-hyaline: pronotum coarsely punctate, anterior transverse callosities confluent: head broader between the eyes than in *C. signatus*

Dr. P. B. Uvarov has kindly compared this species with the type of *signatus* in the British Museum. He states that all the specimens from India named *signatus* by Distant belong to this species (*indicus*). It would seem that the record of *signatus* (which is an Australian species) from India is incorrect. Since writing the above I have compared these with Distant's type in the British Museum and I agree with Dr. Uvarov

Length : 4 mm.

Habitat : Coimbatore (*E. Ballard, Y. Ramachandra Rao* and *A. G. R.*): Palur, South Arcot, on *Crotalaria juncea* (*Y. Ramachandra Rao*): Coimbatore, "Under bricks" (*Y. Ramachandra Rao*).

I have also collected this species from cotton plants infested with *Aphis gossypii*, Glover.

Of the many species of Miridæ found on cotton, this one was the first to appear in the season 1921-22 and was followed by *C. aphidicidus* The cotton was infested with Aphis.

Deræocoris aphidicidus, n. sp. (Pl XVI, fig. 3).

Head pale ochraceous, basal margin black; four longitudinal dark brown lines at the apex, brown transverse lines in front of the eyes, a small fuscous chevron on the vertex and posterior to it two elongated fuscous spots. Eyes black. Antenna: first joint reddish brown with fuscous apical area; second joint, apex black, third joint ochraceous; fourth black. Pronotum very dark fuscous, margins and lateral areas ochraceous, the latter spotted with brown. Scutellum black with lateral margins and apex ochraceous, clavus fuscous; corium ochraceous, spotted fuscous especially along the veins, two fuscous areas at the apex, apex of cuneus fuscous, membrane sub-hyaline; legs ochraceous; posterior tibiæ annulated fuscous. On the anterior and intermediate legs and femora of posterior legs the annulation is incomplete. The eyes are large and the space between them less than half the length of the anterior margin of the pronotum.

Length : 4 mm.

Habitat : Coimbatore, South India.

Bred from eggs laid in cotton stems (*Y. Ramachandra Rao*); predaceous, especially on *Aphis gossypii*, Glover.

Type in British Museum. Closely allied to *Camptobrochis orientalis*.

Deræocoris dissimilis, n. sp. (Pl. XVI, fig. 4).

Ochraceous inclined to virescent. Eyes and apex of second joint of antenna black, remainder of the second joint mottled fuscous, first, third and fourth joints

fuscous. Pronotum more convex and more densely punctate than in *C. similis* Scutellum with two narrow semicircular pale fuscous markings the hooks of which point outwards. Corium ochraceous.

Length : 6 mm.

Habitat : Kodaikanal, Palni Hills, South India (*T. V. Campbell*).

Type in British Museum.

Stechus fletcheri, n. sp. (Pl. XVII, fig. 5).

Pale olivaceous green. Antenna: first joint olivaceous green ; basal half of the second joint the same except the extreme base which is black, apical half black ; base of the third joint ochraceous, the remainder black ; fourth joint same as third. Eyes black. Pronotum, corium, cuneus and clavus deeper olive than the head ; apex of the corium infuscated. Scutellum with apex and a thin longitudinal central stripe dark fuscous. Membrane pale fuscous with darker mottling. Apical area of the posterior femora fuscous brown with two pale subapical annulations. Closely allied to *Stechus libertus*, Dist.

Length : 5 mm.

Habitat : Shevaroy Hills. 4,500 feet (*T. Bainbrigge Fletcher*) ; Chikballapur, Mysore (*C. N.*)

Type in the British Museum.

Megacœlum esmedoræ, n. sp. (Pl. XVIII, fig. 6).

Head about as long as broad, abruptly sloped anteriorly, profile seen from the side nearly straight. Antenna inserted halfway down the anterior margin of the eye. First joint of the rostrum longer than the head, the rostrum just reaching the posterior coxa. Height of the head greater than its breadth seen in profile. Eyes large, breadth of head between the eyes smaller than in other species of *Megacœlum* which the writer has been able to examine, smaller in female than in male. Sulcation of vertex present but rather obscure, but more marked in the male. Eyes extend well beyond the anterior margin of the pronotum. First antennal joint moderately thickened, only just shorter than the length of the pronotum, very slightly thicker than the second joint which is not thickened apically, and in the male thicker than in the female, rather thicker than in other species of *Megacœlum* ; third joint $\frac{2}{3}$ length of second joint. which is 3 times length of the first ; third and fourth joints together equal in length to second joint. Pronotum moderately convex and sloping anteriorly, obscurely transversely rugose, basal angles rounded, lateral margins straight, breadth nearly twice the length, anterior collar small, calli prominent. Scutellum flat, triangular, rather small, rugose. Hemelytra just reach apex of abdomen. Posterior femora slightly more than half the length of

the insect. Posterior leg longer than insect (9 mm. · 7 mm.). All femora with two apical setæ. Tibiæ spinulose; first two tarsal joints together less than last joint.

Antenna ochraceous, mottled fuscous, fourth joint almost entirely **dark fuscous.** Head rugulose before the eyes. Eyes and head dark fuscous. Hemelytra dark fuscous with ochraceous central transverse fascia on the corium, membrane fuscous. Anterior and intermediate legs testaceous, femora and in some cases the tibia of the posterior leg fuscous and dark fuscous. Coxa testaceous in the posterior and intermediate pair. All three pairs of legs have femora mottled fuscous. Finely pilose. In some individuals the cuneus is distinctly red brown. Pleuræ and pronotum may be sanguineous. The nearest species of *Megacœlum*, so far as structure is concerned, is *M. biseratense* :

Habitat : Coimbatore; bred from *Nîm* trees (*Azadirachta indica*) (*Y. Ramachandra Rao*).

Type in British Museum.

Megacœlum horni, Poppius.

Fourth joint of the antenna brown, except at the base where it is yellow. In the original description of this species it is stated that the fourth joint was missing in the Type.

Hyalopeplus krishna, n. sp. (Pl XVII, fig. 7).

Similar in general appearance to *Hyalopeplus* (*Callicratides*) *rama*, Dist. It differs chiefly in that the posterior half of the pronotum is irregularly punctured (not transversely rugulose as in *H. rama*) and the central red stripe is absent. The reddish colouration of the cuneus is fainter than in *H. rama*. The pronotum is less constricted and is more convex. The apices of the posterior femora are faintly infuscated. Legs ochraceous. Apex of second antennal joint and the third and fourth joints piceous. First antennal joint shorter in proportion than first joint in *H. rama*.

Habitat : Chapra. (N. Bihar).

Type in British Museum.

Pœciloscytus rugulus, n. sp.

Brick red. Head, pronotum, scutellum and hemelytra flavescently pilose. Eyes black. Base and extreme apex of first antennal joint, apical two-thirds of second joint and third joint, and whole of fourth joint black, base of third joint pale ochraceous, base of second joint and all first joint except base and apex brick red. Membrane fuliginous. A triangular black marking at the inner basal area of the corium below clavus and inner basal angle of cuneus. Veins of membrane all pinkish. Cuneus and part of anterior margin of corium sanguineous. Body beneath brick

red, flavescently pilose, with sternites and coxæ suffused fuscous. Anterior legs red with tarsi pale ochraceous. Basal half of posterior femora very pale orange. Apical two-thirds of tibia pinkish. Apices of tarsi black. Intermediate legs have similar colouring but tarsi more uniformly red.

Length : 7 mm.

Habitat : Kollur Ghat, 3,000 feet, South India · Nagodi, 2,500 feet. South Kanara (*T. V. Ramakrishna Ayyar*).

Type in British Museum (Natural History).

Pœciloscytus aureus, n. sp

Black, flavescently pilose. Head, posterior margin of pronotum, apex of scutellum, a spot on the costa near the apex of corium and a broad fascia on the cuneus ochraceous. Membrane hyaline with vein of cell fuscous. Proximal area of posterior femora and annulation of the tibia ochraceous, remainder of leg fuscous and flavescently pilose; anterior femora fuscous; tarsi on anterior and posterior legs pale ochraceous; intermediate pair of legs and antennæ missing in specimens examined. An interrupted thin black line runs along lateral margin of abdomen. Pleura of thorax black and thickly flavescently pilose.

2½—3 mm.

Habitat : Coimbatore, South India (*T. Bainbrigge Fletcher* and *T. V. Ramakrishna Ayyar*).

Type in British Museum.

Sub-Family MACROLOPHINÆ.

Division CREMNOCEPHALARIA.

Nicostratus monomoriiformis, n. sp. (Pl. XIX, fig. 8).

Head and pronotum brownish ochraceous. Antenna : basal joint ochraceous : second joint inclined to fuscous, apex black ; third joint, apex black, basal area brownish ochraceous ; fourth joint black, apical area very pale stramineous. Scutellum dark fuscous. Margins of the strongly developed scutellar spine stramineous. Corium and clavus very dark brown except at the base. A white transverse fascia crosses both corium and cuneus at the apex of the scutellum.

Legs · proximal end of femora of intermediate and posterior legs pale stramineous, distally fuscous ; proximal end of tibiæ fuscous, distally ochraceous. as are the tarsi except for the last joint ; first pair of legs fuscous except for the tarsi which are pale ochraceous. Pronotum constricted anteriorly and armed with two strong diverging spines. The first antennal joint is shorter than in *N. princeps*, Dist., the head is longer and the eyes are reniform. The general colour-

tion, though similar, is darker and more nearly resembles *N. diversus*, Dist. This species bears a striking resemblance to *Monomorium indicum* Forel.

Length : 4 mm.

Habitat : Chikballapur, Mysore (*T. V. Campbell*).

Type in British Museum (Natural History).

Sohenus uvarovi, n. sp. (Pl. XX, fig. 9).

Dull, light fuscous to fuscous black. A triangular clear fascia running from the middle of the costa and incompletely bisecting the corium. Infuscation of the hemelytra much deeper around the apex of this triangle : apical part of corium and cuneus deep fuscous. The membrane sooty with a distinct ocellate marking near the apex of the membrane cell. Antenna : first joint pale ochraceous having on the under side two deep reddish-brown longitudinal stripes ; second joint deep chestnut ; third joint ochraceous ; fourth joint fuscous ; the third joint may be infuscated basally and apically. Coxæ and under side of thorax deep reddish brown, almost lake in some cases. Femora reddish ochraceous, more red colouring at the base of the femora. Tibiæ ochraceous on the anterior legs, reddish in the middle and deep reddish brown on the last pair. Tarsi black.

Anterior part of the pronotum, which forms a wide " collar," is rugose. Some variation is shown by the pronotum. Anteriorly of the median constriction it is finely punctate and the basal half of the pronotum is more or less strongly transversely rugose ; in other specimens this is not so marked and the pronotum has more the appearance of being finely punctate, the specimens being in other respects identical ; there is no doubt about all being one species.

Measurements : Antenna ; first joint $\frac{1}{4}$th the length of second, second $\frac{1}{4}$ as long again as third, third half as long again as the fourth.

Head in length equal to that of pronotum without the " collar." Pronotum, anterior margin about $\frac{1}{2}$ the posterior margin. Hemelytra only just reach beyond the apex of the abdomen. Rostrum does not quite reach the middle coxa. Head seen from in front distinctly higher than broad. Insertion of the antenna at about the lower third of the anterior margin of the eye. Eye not raised above the vertex, small, the vertical diameter being about equal to the gena. Length of the body just equal to that of the antenna (5 mm.) rather larger in fresh specimens.

This species in life bears a striking resemblance to *Camponotus compressus*, an ant very commonly found tending Mealy-bugs and Aphids. It was among these ants that it was first found, *S. uvarovi* apparently feeding on a Mealy-bug. *S. uvarovi* differs from *S. proditus* in the presence of the ocellate spot on the membrane, in its colouring and in its size.

Habitat : Coimbatore, South India.

Type in the British Museum.

4 ♂♂, 5 ♀♀ (*Y. Ramachandra Rao* and *T. V. Ramakrishna Ayyar*).

Sub-Family MACROLOPHINÆ.

Division MACROLOPHARIA.

Cyrtopeltis (*Gallobelicus*, Dist.) *cruentatus*, n. sp. (Pl. XX, fig. 10)

Size as in *C.* (*Gallobelicus*) *crassicornis*. Ochraceous, possibly more virescent in life. Rather sparsely long-pilose. First antennal joint, except apex and base, red brown; base and a sub-apical broad annulation of second antennal joint red brown; third joint similarly marked but of a deeper red brown: Fourth joint dark brown: antenna finely flavescently pilose. Markings of thoracic pleuræ and base of rostrum blood red. Anterior portion of pronotum along the sulcation and transversely at the constriction sanguineous. There may be two fuscous spots just posterior to the constriction. Scutellum with two fine curved median longitudinal fasciæ deep red, the concavity being outwards. The exposed mesonotum has two deep red markings and a central ochraceous stripe. Apex of corium and apex of cuneus and vein of membranal cell sanguineous. Membrane hyaline. Intermediate femora with sub-apical blood-red annulation, which is about three times as broad on the posterior femora: the basal half of these latter, excluding the extreme base, brownish red. (This last marking may be absent). Apices of tarsi red-brown.

Length: 3 mm.

Habitat: Coimbatore and Kistna Districts, South India; on grass (*Y. Ramachandra Rao*), on *Boerhavia repens* (*T. Bainbrigge Fletcher*).

Type in British Museum (Natural History).

Cyrtopeltis (*Gallobelicus*, Dist.) *cæsar*, n. sp.

Colouration as in *G. crassicornis*, Dist., but, as far as the antennæ are concerned, paler; a variation is that in one specimen the first antennal joint is not black and the basal and apical portions of the second joint are much paler than in *crassicornis*. The antenna is longer in proportion in this species than in *crassicornis*. Total length of insect is 4 mm. whilst *crassicornis* measures 3 mm. The eyes are larger and the space between them smaller. The pronotum is more broadly sulcate anteriorly. The membranal cell is somewhat apically constricted.

Habitat: Godavari District, South India; on tobacco (*T. V. Ramakrishna Ayyar*).

Type in British Museum.

Armachanus pusæ, n. sp. (Pl. XXI, fig. 11).

Mottled brown, the mottling of head and pronotum and first antennal segment more reddish brown than on the hemelytra. Eyes black. Broad dark brown subapical annulation on first antennal segment of which the base is dark brown. Legs mottled with reddish brown. Posterior and intermediate coxæ luteous. Anterior

coxæ dark brown. Rostrum reddish brown. Abdomen fuliginous. On the head, between the eyes, three ocelli-like tubercles, another large pale tubercle at the centre of the posterior margin of the pronotum, a short carina running from this to the pronotal constriction. The hemelytra bear a dark brown semicircular marking on the corium the anterior horn of which is confluent with a marginal brown marking on the clavus. Membrane fuliginous with the veins white. The cuneus is dark brown with lighter spots, the outer basal angle and the apex dark brown. All but basal segments of the antennæ missing.

A single female specimen from Pusa, Bihar, North India, (*T. Bainbrigge Fletcher*) on the trunk of *Cassia fistula*, attended by *Camponotus*). Type in collection at Pusa. [Since sent to British Museum. *T. B. F.*]

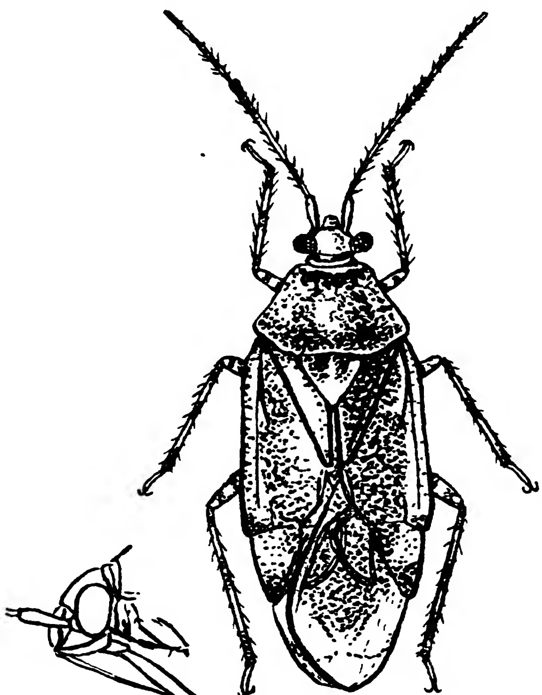

FIG. 1. *Deraeocoris maculatus*, Ballard. (×10)

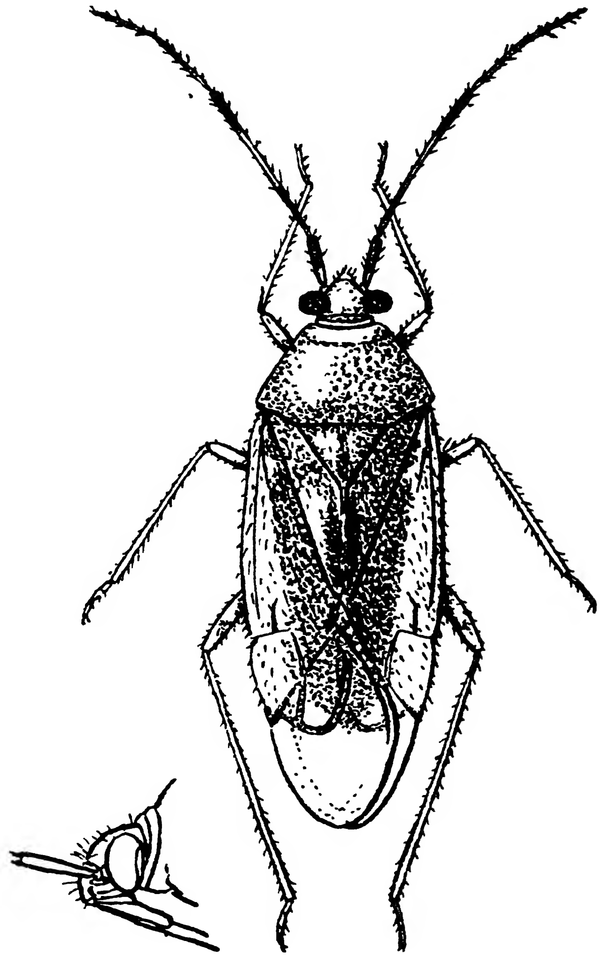

FIG. 2. *Deraeocoris indicus*, Ballard. (×16.)

PLATE XVI.

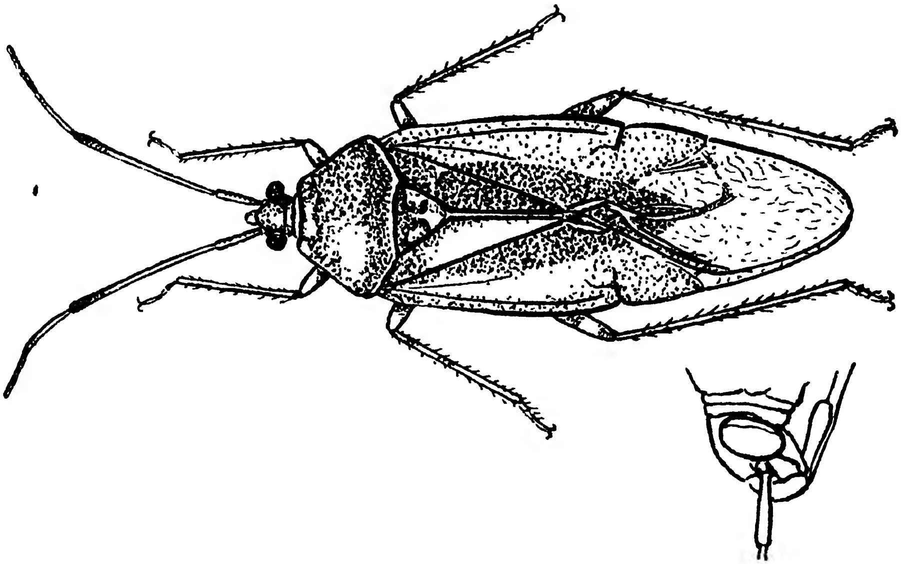

FIG. 4. *Deraeo..ris dissimilis*, Ballard. (×16.)

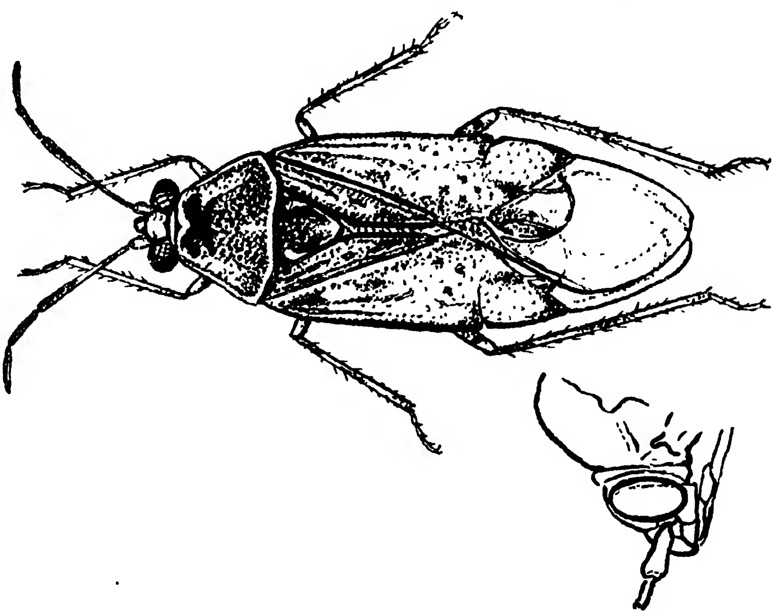

FIG. 3. *Deraeocoris aphidicidus*, Ballard. (×16.)

PLATE XVII.

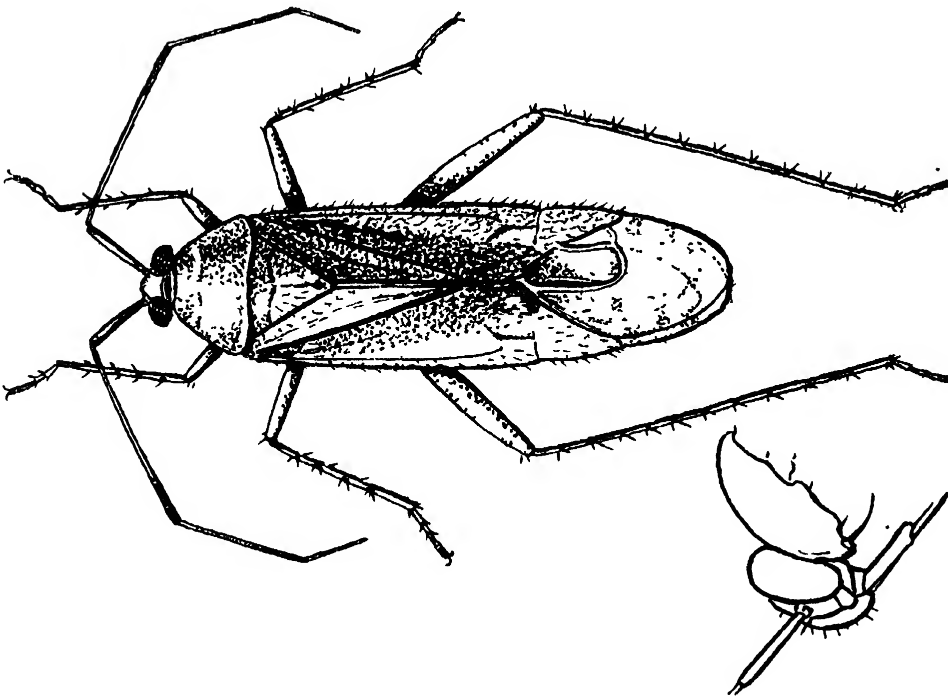

FIG. 5. *Stechus fletcheri*, Ballard. (×16.)

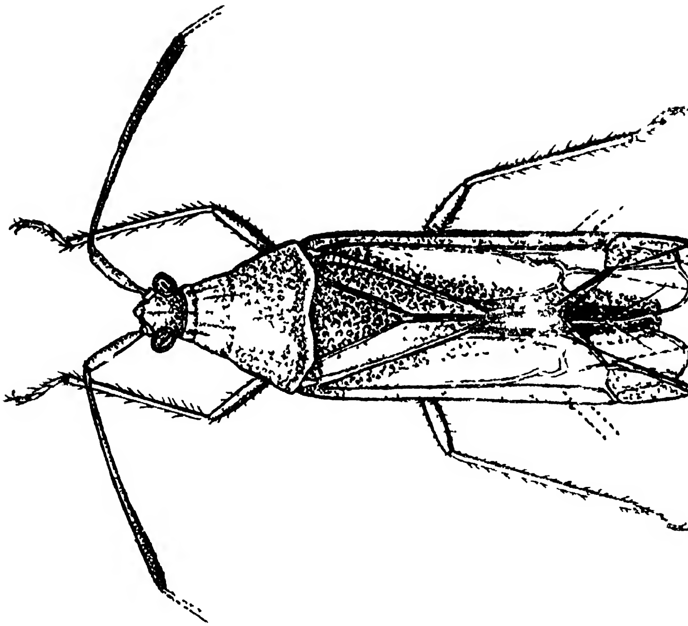

FIG. 7. *Hyalopeplus krishna*, Ballard. (×12)

PLATE XVIII.

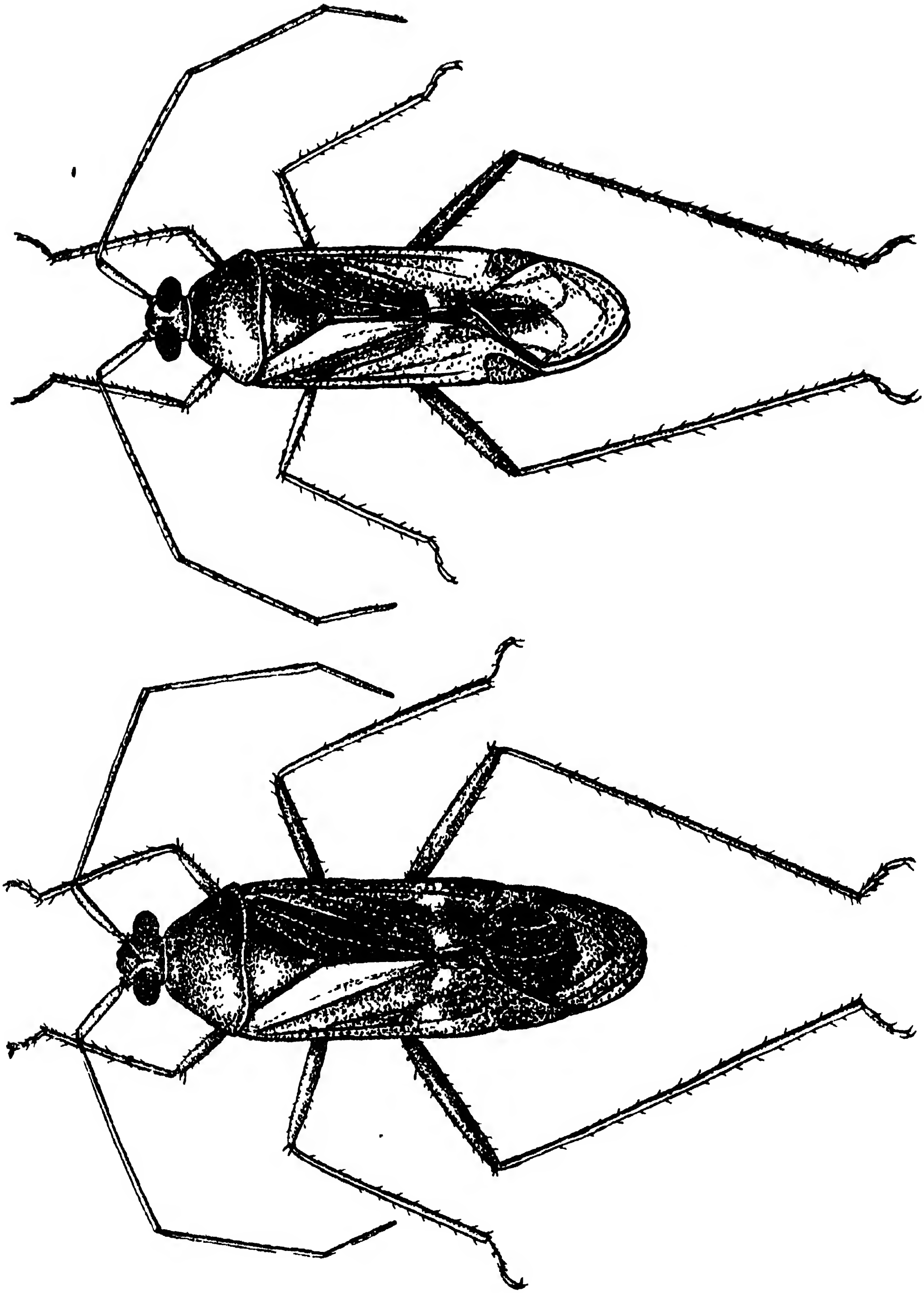

Fig. 6. *Megac elum esmedorae*, Ballard. ♀ and ♂ (×12.)

PLATE XIX.

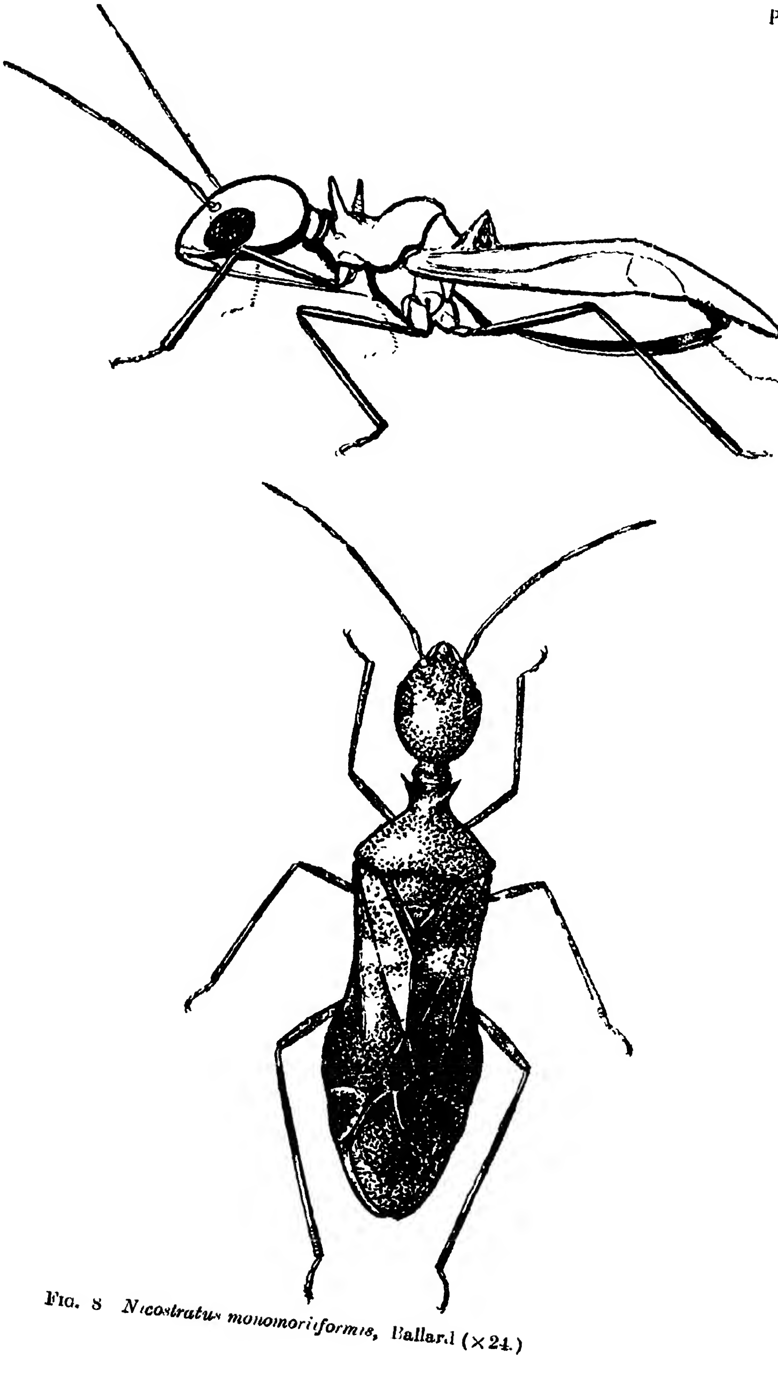

FIG. 8 *Nicostratus monomoriiformis*, Ballard (×24.)

PLATE XX.

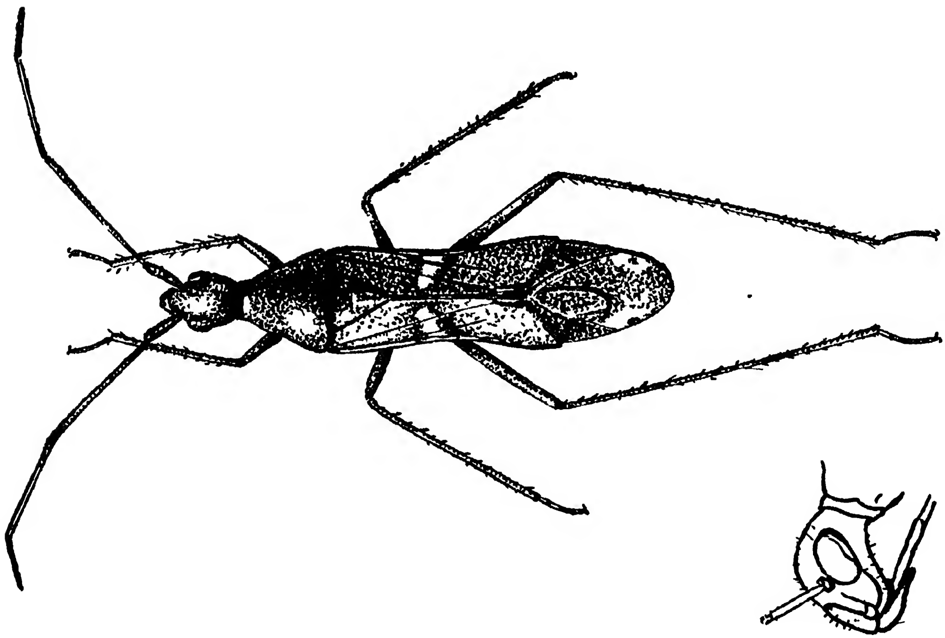

FIG. 9. *Sohenus uvarovi*, ballard. (×12.)

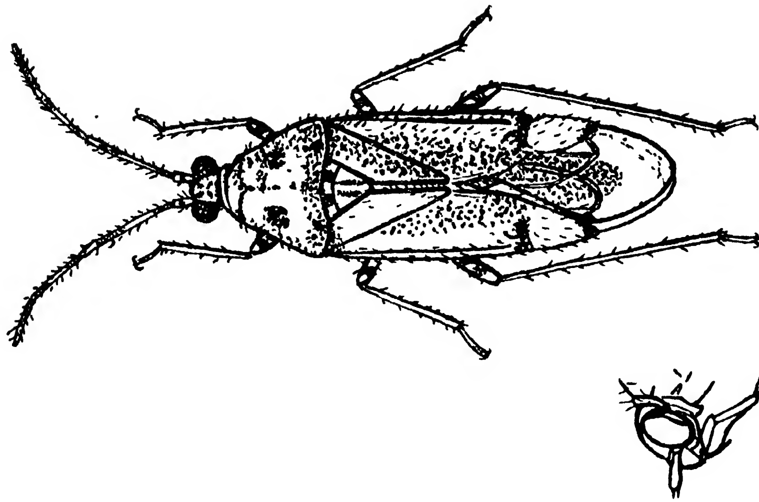

FIG. 10 *Cyrtopeltis cruentatus*, Ballard. (×36.)

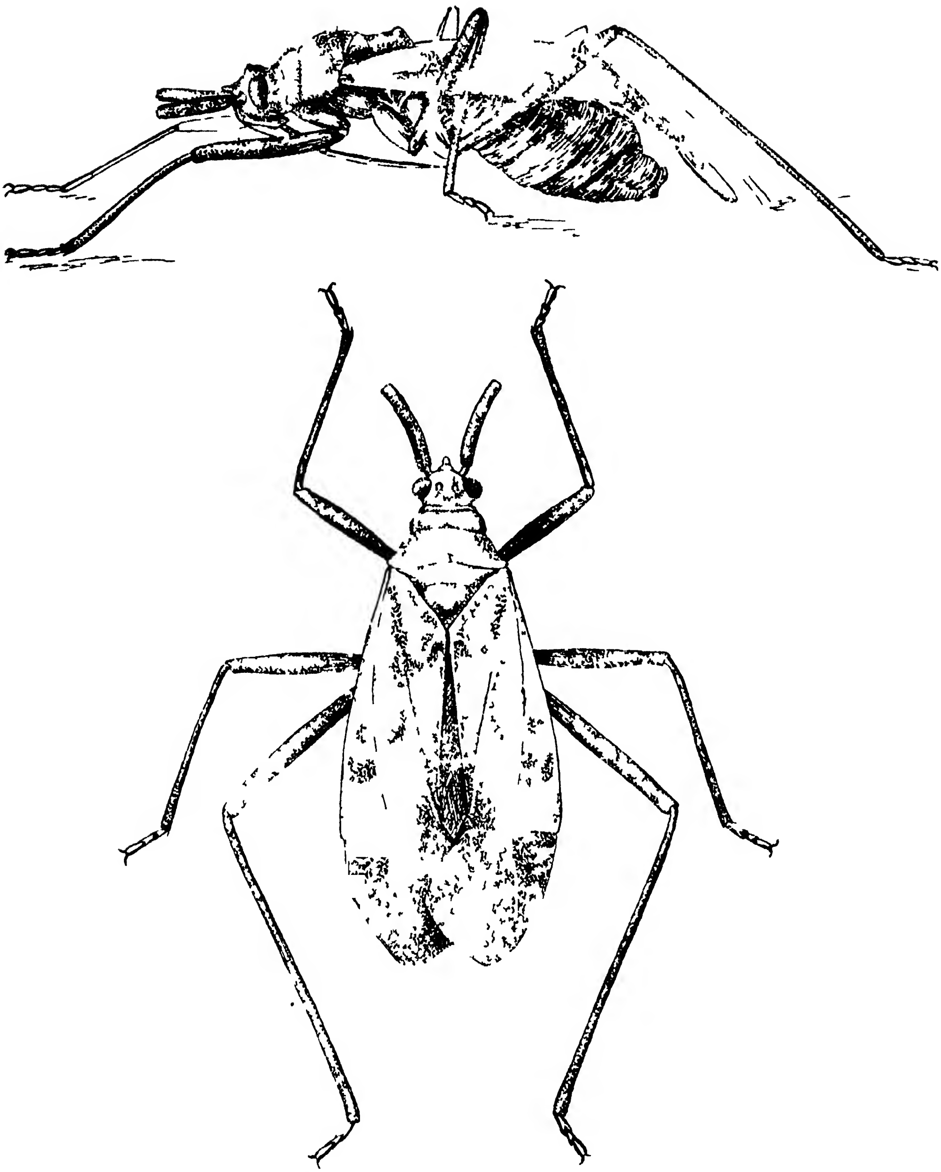

Fig 11. *Armulanus pusae*, Ballard.
(Drawn from type × 12.)

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The use of Hydrocyanic Acid Gas for the Fumigation of American Cotton on Import into India

Experiments on its Lethal Power for the Mexican Boll-Weevil (*Anthonomus grandis*), and for the Grain-Weevil (*Sitophilus oryzae*); on the Extent to which it is absorbed by Cotton and Jute respectively; and on a Practical Method for Satisfactory Fumigation on a Large Scale.

BY

A. JAMES TURNER, M.A., B.Sc.
Director, Technological Laboratory, Indian Central Cotton Committee, Bombay

AND

D. L. SEN, M.Sc. Tech., M.Sc., A.I.C.

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FOREWORD

BY

B. C. BURT, M.B.E., B.Sc., I.A.S.

Secretary, Indian Central Cotton Committee.

Prior to the war India imported American cotton in varying amounts but averaging some 26,000 bales per annum. In 1920-21 such importations were again heavy and in view of the enormous damage caused by the Mexican Boll-Weevil in the United States, the question whether this pest might not find its way into India through the medium of imported baled cotton was raised by two Chambers of Commerce. Enquiries showed that there was a definite risk of the pest being so introduced and that if this happened the damage to the Indian crop might be incalculably great. A consideration of the known facts regarding the life history of *Anthonomus grandis* and a comparison of the climatic conditions of the Indian cotton-growing tracts with those of the American cotton belt lead inevitably to the conclusion that, once introduced, the Boll-Weevil would spread rapidly in India. Hence, in 1923, the Indian Central Cotton Committee recommended to the Government of India that in future American cotton should only be imported on the condition that it was fumigated with hydrocyanic acid gas at the port of entry. This fumigant was chosen because it was already in use in America, where all imported cotton is required to be fumigated in order to prevent the introduction of another pest (the Pink Bollworm), and because American experiments had shown that such fumigation had no deleterious effect on the spinning, dyeing and bleaching properties of cotton. Furthermore, the machine for the continuous generation and the control of hydrocyanic acid gas for fumigation purposes, designed by Col. Glen Liston, I.M.S., provides a safe and convenient method of carrying out fumigation. The commercial aspect of the question was examined by the Central Cotton Committee, and in view of the great variation in arrivals of American cotton in different seasons and the need of elasticity in any scheme for the fumigation of such cotton, it was decided to fumigate the cotton in barges.

This memoir describes the experimental work done by the Central Cotton Committee at the request of the Government of India to determine the conditions under which fumigation should be carried out and the safeguards necessary. In particular, it was necessary to ascertain the concentration of gas to be employed and the period of exposure necessary in order to ensure the destruction of the weevils. A feature of the experimental work, and of the commercial fumigation alike, is that the actual concentration of hydrocyanic acid gas in the atmosphere of the fumigating vessel, chamber, or barge, is determined with precision. Where insects with relatively high resisting powers have to be dealt with, this is a point of extreme importance for, as the results show, the actual concentration obtained may differ considerably from that calculated from the quantities of chemicals used.

From the 1st of December 1925, when the Government notification came into force, until the end of January 1927 approximately 89,000 bales of American cotton

have been fumigated in Bombay ; and as the arrangements have worked smoothly the *modus operandi* may be described briefly. The barge in which fumigation is to take place is sent alongside the ship and the cotton is discharged into it overside. The loaded barges are towed to the fumigation wharf, closed by special gas-tight hatch covers, the Liston machines placed on the barges and fumigation commenced. The operations at the fumigation wharf commence in the early morning, the application of the gas is continued throughout the day, and the barges remain under gas, with a falling concentration, during the night. Next morning the concentration of gas in the barge is determined with due precautions, the hatch covers are removed and after a sufficient period to allow of the dispersal of remaining gas, the barges are unloaded. In the ordinary routine of working each barge is turned round every three days. When arrivals are unusually heavy auxiliary barges for the transport of the cotton from the ship to the fumigating wharf are used, the fumigating barges then being moored and used as floating fumigating chambers only. Under this system the capacity of the fumigating plant is increased by 50 per cent. The plant at present provided in Bombay is capable of dealing with some 1,300 bales of cotton daily.

Though cumbersome, this method of handling American cotton for fumigation has several advantages, especially as imports are far from regular. The system is elastic and readily adaptable to consignments of varying size. Cotton is not landed until after fumigation and there is the minimum of handling of cotton before it is fumigated. It was at first intended to confine the importation of American cotton to the fair weather season and to prohibit importations entirely during the monsoon, but it was found possible by a slight modification of the scheme to avoid this interruption of trade. During the monsoon period fumigation is carried out in the Docks, utilising berths which in the fair weather are required for the coasting trade. To deal with the possibility of American cotton having to be discharged at a time when, owing to weather conditions, fumigation might be impossible, a quarantine shed is provided in the Docks.

The cost of fumigation [1] is appreciable and is paid by the importer. Fortunately, it has now been found possible to reduce these charges ; indeed it was one of the first objects of the experimental work described in the memoir to ascertain how fumigation could most economically be conducted. Experimental work progressed step by step with the arrangements for the introduction of fumigation on a commercial scale and the latter was started as soon as the necessary data were forthcoming, refinements being introduced as additional light was thrown on the subject. The memoir describes experimental methods adopted and should be of use to anyone who may be called upon to deal with the destruction of insect pests of similar type on a commercial scale.

B. C. BURT.

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[1] For details see Appendix V. Of the present charge of Rs. 3-1-0 per bale, Rs. 2-1-0 is on account of handling charges, including the conveyance of the cotton to the special fumigation wharf.

SUMMARY.

The memoir describes experiments undertaken to ascertain the conditions under which hydrogen cyanide would be a satisfactory fumigant for American cotton bales, which, it has been feared, might be a vehicle for the introduction into India of the Mexican Boll-Weevil (*Anthonomus grandis*). Experiments were carried out on three scales, *viz.*, small-scale, one-bale scale, and full-scale. Most of the experiments were carried out on the small scale, using a glass vessel (actually a large desiccator) as a container for the material being fumigated (cotton, etc.). The hydrocyanic acid gas was generated direct in this glass vessel ; a method was worked out for sampling at intervals the atmosphere produced therein. The apparatus is described in detail and the possible sources of error fully discussed ; the conclusion is reached that the apparatus was quite satisfactory for the purpose desired. Various chemical difficulties were encountered ; among these was the effect of the presence of chloride as impurity in the cyanide used for the generation of HCN. Some results of analyses in this connection are given. Other interesting results obtained were that larger and more constant yields of HCN are produced when a little water is present in the cyanide-acid reaction ; and that concentrated sulphuric acid is a strong absorbent of HCN.

Experiments were carried out to determine first, what concentration of HCN and what duration of exposure are necessary in order to exterminate the weevils ; and secondly, whether the cotton or its jute covering may absorb and subsequently desorb HCN, and, if so, to what extent. In India the experiments were confined to a resistant weevil—the grain-weevil, *Sitophilus oryzae*—but it was subsequently arranged with the authorities in America to repeat the work there using the Mexican Boll-Weevil itself.

It is concluded from the experiments that to ensure the extermination of the grain weevils under Bombay conditions, it is sufficient to expose them for a period of 20 hours to a HCN-concentration of 150 parts HCN per 100,000 by volume (calculated as at normal temperature and pressure). The weevils were found to be much more susceptible to the influence of the HCN at higher than at lower temperatures, and it appears that a temperature of 86°F. is fairly critical, there being a marked difference in susceptibility on either side of this temperature.

From an examination of the experimental results for the Mexican boll-weevli, it appears that there is not a great difference in susceptibility between the grain-weevil and the boll-weevil and that the temperature has an important effect on the susceptibility of the boll-weevil also ; if anything, the boll-weevil is more sensitive than the grain-weevil, at any rate to exposures for a comparatively short time at high HCN-concentration. The conclusion is drawn that under Bombay conditions the boll-weevils would be exterminated by an exposure for 4 hours to a HCN-concentration of 450 parts HCN per 100,000 by volume or for 20 hours to

a HCN-concentration of 150 parts HCN per 100,000 by volume (calculated as at normal temperature and pressure). For most effective working on a practical scale. it is further concluded that the best procedure is to combine a short-period fumigation (6 hours) at a high concentration with a long-period fumigation (a further 12-14 hours) at a lower concentration, the minimum initial concentration for the second period being not less than 200 parts HCN per 100,000 by volume.

The conclusions drawn from the cotton absorption experiments are: (1) That cotton does absorb HCN, whether the cotton be loose or baled, dry or damp; (2) that damp cotton is rather more absorbent than dry cotton, the difference in absorption for extremes of humidity being about 50 per cent. of the dry absorption; (3) that within the limits of temperature 86°-104°F. the actual temperature has very little influence either on the rate or on the degree of absorption of HCN by cotton; (4) that absorbed HCN is desorbed fairly rapidly and completely, and that there is no evidence of the occurrence of any irreversible chemical combination; (5) that with water present in the cyanide-acid reaction the weight of sodium cyanide required for satisfactory fumigation is about 0·05 per cent. of the weight of the cotton, but that where leakage has to be contended with as when using barges on a practical scale,— the weight of sodium cyanide required is about 0·07 per cent. of the weight of the cotton, or one pound weight of sodium cyanide for three bales of cotton. Subsequent experience on the practical scale has shown, however, that one pound weight of sodium cyanide is sufficient for the satisfactory fumigation of about five bales of cotton, when good barges are used and when the bales are both dry and also compressed to a high density; (6) that fumigation with HCN can be satisfactorily carried out on a large scale in barges.

The conclusions drawn from the jute absorption experiments are: (1) That jute has about twice the absorptive power of cotton, and moreover absorbs the HCN at a more rapid rate: (2) that the absorptive power of jute is only to a small extent dependent on its moisture content, being however slightly greater for damp jute than for dry; (3) that the absorptive power of jute remains practically unchanged throughout the temperature range 86°-104°F.

The results of these experiments led the Government of India to issue in November, 1925, a Notification under the Destructive Insects and Pests Act, 1914, requiring all American cotton imported into India to be subjected to fumigation with HCN and confining such importation and fumigation to the port of Bombay. Experience which has since been accumulated in the application of this Notification to the fumigation of over 80,000 bales in barges, has amply confirmed the conclusions previously arrived at as to the absorptive capacity of cotton bales.

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THE USE OF HYDROCYANIC ACID GAS FOR THE FUMIGATION OF AMERICAN COTTON ON IMPORT INTO INDIA.

(EXPERIMENTS ON ITS LETHAL POWER FOR THE MEXICAN BOLL-WEEVIL *Anthonomus grandis* AND FOR THE GRAIN-WEEVIL *Sitophilus oryzae*; ON THE EXTENT TO WHICH IT IS ABSORBED BY COTTON AND JUTE RESPECTIVELY; AND ON A PRACTICAL METHOD FOR SATISFACTORY FUMIGATION ON A LARGE SCALE.)

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I. Introduction: the Problem.

The ravages of the Cotton Boll-Weevil in America have excited grave fears that this pest might at some time or other be introduced into India. Should this happen, there can be but little doubt that it would cause great havoc among the cotton crops of this country also. The questions have therefore arisen: first, as to what are the most likely sources of introduction of the weevil, and, secondly, as to what steps might be taken as safeguards against the introduction of the pest from these sources.

Examination of the problem has led to the conclusion that the danger is most to be apprehended from weevils in American cotton bales. It is not regarded as feasible for live weevils to exist in the interior of a cotton bale, for it is most probable that no weevil would survive the action of the compress if it gained access to the cotton before the pressing; while it would not appear to be possible for a weevil to burrow its way into the interior of a pressed bale, even in the unlikely event of its attempting to do so. But real danger appears to threaten from weevils finding a convenient resting place in or below the gunny coverings of the bales. Thus, Dr. W. D. Hunter of the United States Department of Agriculture wrote in July 1922: "The longevity of the adult boll-weevil depends on seasonal conditions

In the summer it rarely lives as long as fifty days. In the cooler portions of the year it has been known in numerous cases to live as long as six months. Therefore as far as the time element is concerned, the establishment of the weevil in India by carriage on bales of American cotton would be a distinct possibility. The American cotton is wrapped in very coarse jute fibre. The covering gives many opportunities for the boll-weevil or other insects to be carried. Many thousands of the weevil are concentrated around the gins each season where they may easily make their way to the bales which are lying on platforms awaiting storage."

There are a number of other routes—more or less indirect—by means of which the boll-weevil might conceivably find its way to India. And although examination of such possibilities shows them to be very remote contingencies, against which the most stringent precautions might be taken in vain—as in the case of any other insect pest—their existence does make it impossible to guarantee that the boll-weevil can in any case be kept out of India for all time.

But while it may be impracticable to close every possible avenue by which the boll-weevil might reach India, there is nevertheless, as already indicated, every reason to suppose that the American cotton bales constitute by far the most likely source of infection. It is, therefore, concluded that if all such cotton bales are satisfactorily fumigated on arrival in India the likelihood of the introduction of the weevil is reduced to a minimum. The present paper is a description of experiments undertaken with a view to determining what constitutes "satisfactory fumigation". Most of these experiments were carried out on a small scale in the Laboratory. Seeing that the cost of the fumigation is a most important matter from the practical aspect, some experiments were also carried out to see whether satisfactory fumigation could be done in barges, the use of which appeared to have great advantages both from the point of view of cost and also of flexibility. There is a big gap, however between purely laboratory experiments and experiments with, say, 80 bales of cotton in a barge hold: moreover, it is impossible to ensure that a barge hold is really very gas-tight. It was nevertheless desirable to confirm the small scale Laboratory results on a larger scale, and so some further experiments were made on an intermediate scale, in which a single bale of American cotton was subjected to treatment.

(i) The Toxicity of Hydrogen Cyanide.

Before proceeding with the description of these experiments it is necessary to define their scope. According to Liston and Goré [1] previous work had shown that for animal life hydrocyanic acid gas (HCN)* was a deadly poison, although its

[1] W. G. Liston and S. N. Goré. The Fumigation of Ships with Liston's Cyanide Fumigator: *Journal of Hygiene*, Vol. XXI, No 3, May 18, 1923.

* For the sake of brevity, hydrocyanic acid gas (hydrogen cyanide) is henceforward referred to throughout as HCN.

potency varied according to the particular subject. They give the following lethal concentrations for different members of the animal kingdom :—

TABLE I.

Subject	Lethal concentration parts by volume per 100,000 of air	Duration of exposure necessary
Dog	8	30 minutes
Cat	12	,,
Rabbit	15	,,
Rat	20	,,
Monkey	25	,,
(Man)	(25)	,,

Various other interesting results on the toxicity of HCN are contained in recent scientific literature, a Bibliography of which forms Appendix I.

It was thought desirable, therefore, to try the effects of HCN on weevils also. Already HCN was used for the fumigation of imported cotton in the United States of America, where it had been found that such fumigation in no wise affected the spinning and other valuable practical qualities of the cotton. It was quickly discovered that HCN was not nearly so potent for weevils as for the mammals in the above list. This perhaps is not surprising in view of the fact that the breathing apparatus of the weevils is of the most rudimentary character, so that a considerable time must probably elapse before an external high concentration of HCN can produce a moderately high concentration inside the breathing apparatus of the weevils.

(ii) THE TOXICITY OF FORMALDEHYDE.

There is, of course, the possibility that some substance other than HCN might be more potent in its action on weevils. The choice of substances was limited, however, by the fact that it was proposed to use the substance for the fumigation of cotton bales; evidently, therefore, no substance which had any deleterious action on either cotton or jute could be used for the purpose. A few experiments were in fact tried with formaldehyde, generated by the action of 40 per cent. formalin on powdered potassium permanganate, but as the potency of the formaldehyde as a weevil-killing agent was found to be less than one-tenth that of HCN, the

experiments were discontinued. Moreover, there was considerab'e urgency in the solution of the problem and a thorough examination of all possible substances would have meant long delay in working out completely a satisfactory procedure for any one substance. Under these circumstances the experiments were restricted to the use of HCN.

(iii) Generation of Hydrogen Cyanide : Effect of Chloride as Impurity.

For the purpose of this work it was proposed on grounds of economy and of safety to generate the HCN from sodium or potassium cyanide and sulphuric acid, and not to use liquid HCN as is commonly done in America. As commercial cyanides usually contain a certain amount of chloride, the question arose as to what would be the effect of the presence of chloride. In Liston's paper[1] he quotes from "the very important monograph on fumigation with HCN prepared by the United States Agricultural Department, Bureau of Entomology, Bulletin No. 90, published in three parts in 1911 and written by R. S. Woglum and C. C. McDonnell. The usual method of generating the gas consists in adding solid lumps of cyanide to a 1 to 2 or a 1 to 3 solution of sulphuric acid in water..........McDonnell concludes from the experiments he records. 'that the presence of chlorides or nitrates in cyanides which liberate hydrochloric and nitric acid respectively, together with hydrocyanic acid, on treatment with sulphuric acid cause very marked decomposition of the hydrocyanic acid. The effect produced by hydrochloric acid is much more marked than that produced by nitric acid. In one case, over 92 per cent. of the hydrocyanide acid was decomposed and only a little over 7 per cent. evolved. This is a larger amount of sodium chloride than would ever be found in a commercial sample, but it shows the important bearing this impurity has upon the results. Practically, all commercial potassium and sodium cyanides contain sodium chloride in greater or less amount. Potassium cyanide is frequently sold as "98-99 per cent. pure" which in reality is a mixture of potassium cyanide, sodium cyanide, and sodium chloride and on analysis may show even 100 per cent. expressed as potassium cyanide, yet there may be several per cent. of sodium chloride present. For fumigation work an analysis of a cyanide is of little value unless the chlorin content is also determined.'"

Tests on this point, however, did not confirm McDonnell's results. Even the purest cyanide which could be obtained contained a small amount of chloride; evolution of HCN was in general about 70 to 80 per cent. of the theoretical value, but bore no relation to the content of chloride. Some experiments were then made with synthetic control mixtures of cyanide and chloride in the proportion 60 : 40 and in each case the quantity of HCN evolved was almost exactly proportioned to

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[1] W. G. Liston: The use of Hydrocyanic Acid Gas for Fumigation: *Indian Journal of Medical Research*, Vol. VII, April 1920, 783.

the content of cyanide. These results are detailed in Appendix II. From other results which are described later (page 95) it appears that the low values sometimes obtained by McDonnell are to be ascribed rather to the method of generation than to the chloride content of the cyanide. The lumps of cyanide added will almost certainly not have been of a uniform size, and different concentrations of acid were employed on different occasions. As will be shown hereafter, these conditions were almost ideal for the production of varying yields of HCN in different experiments.

Bearing in mind that the evolved gas has to be used for the fumigation of cotton however, it is important to ensure that there shall be the minimum amount possible of hydrochloric acid gas produced. For this reason, the cyanide used in actual fumigation on a practical scale is of the highest degree of purity obtainable.

(iv) The problem involved.

It has already been stated that the chief object of these experiments was to ascertain what constitutes "satisfactory fumigation." In the main, this resolves itself into determining first, what concentration of HCN and what duration of exposure are necessary in order to exterminate the weevils ; and secondly, whether the cotton or its jute covering can absorb and subsequently give off HCN, and if so, to what extent. As regards the first point, some danger would obviously have attended the introduction of the boll-weevil into India even for these experimental purposes, and the experiments were therefore chiefly confined to the grain weevil, *Sitophilus oryzae* which in a few preliminary experiments was found to be much the most resistant of the various indigenous weevils experimented with, *viz : Myllocerus*, *Odoiporus*, *Polytus* and *Sitophilus oryzae*. As regards the second point, there were two considerations involved,- a minor one concerning the probable consumption and cost of chemicals on a practical scale, and the consequent feasibility of using the method proposed ; the major and much more important consideration was that, as HCN is highly poisonous, it would be necessary to provide ample safeguards for the men who would have to handle the cotton after fumigation. In order to achieve the objects in view it was therefore necessary to find answers to the following questions —

1. Under what simultaneous conditions of concentration of HCN, duration of exposure and temperature, can the grain weevils be killed with certainty ?
2. To what extent, if any, is HCN absorbed by cotton and jute respectively ?
3. To what extent is the absorption, if any, of HCN by cotton and jute respectively dependent on any or all of the conditions of concentration, time of exposure, humidity, and temperature ?
4. To what extent, if any, do cotton and jute respectively give off HCN after being removed from an atmosphere containing this gas ?

For convenience of treatment, the investigations carried out to answer these questions are considered under the following divisions :—

II. Experimental Apparatus and Methods: Sources of error.
III. Blank Experiments: Chemical difficulties.
IV. Experiments with the Grain-Weevil.
V. Experiments with the Boll-Weevil.
VI. Experiments with Cotton and Cotton Bales.
VII. Experiments with Jute.
VIII. General Discussion of the Results: Practical Considerations.
IX. Conclusions.

The experiments on the three different scales were carried out more or less simultaneously, but the description of them for any one division will be simpler to follow if given, not in the chronological order, but in the order of increasing scale, the small scale (desiccator) experiments being dealt with first, then the intermediate scale (one-bale) experiments, and lastly the full-scale experiment.

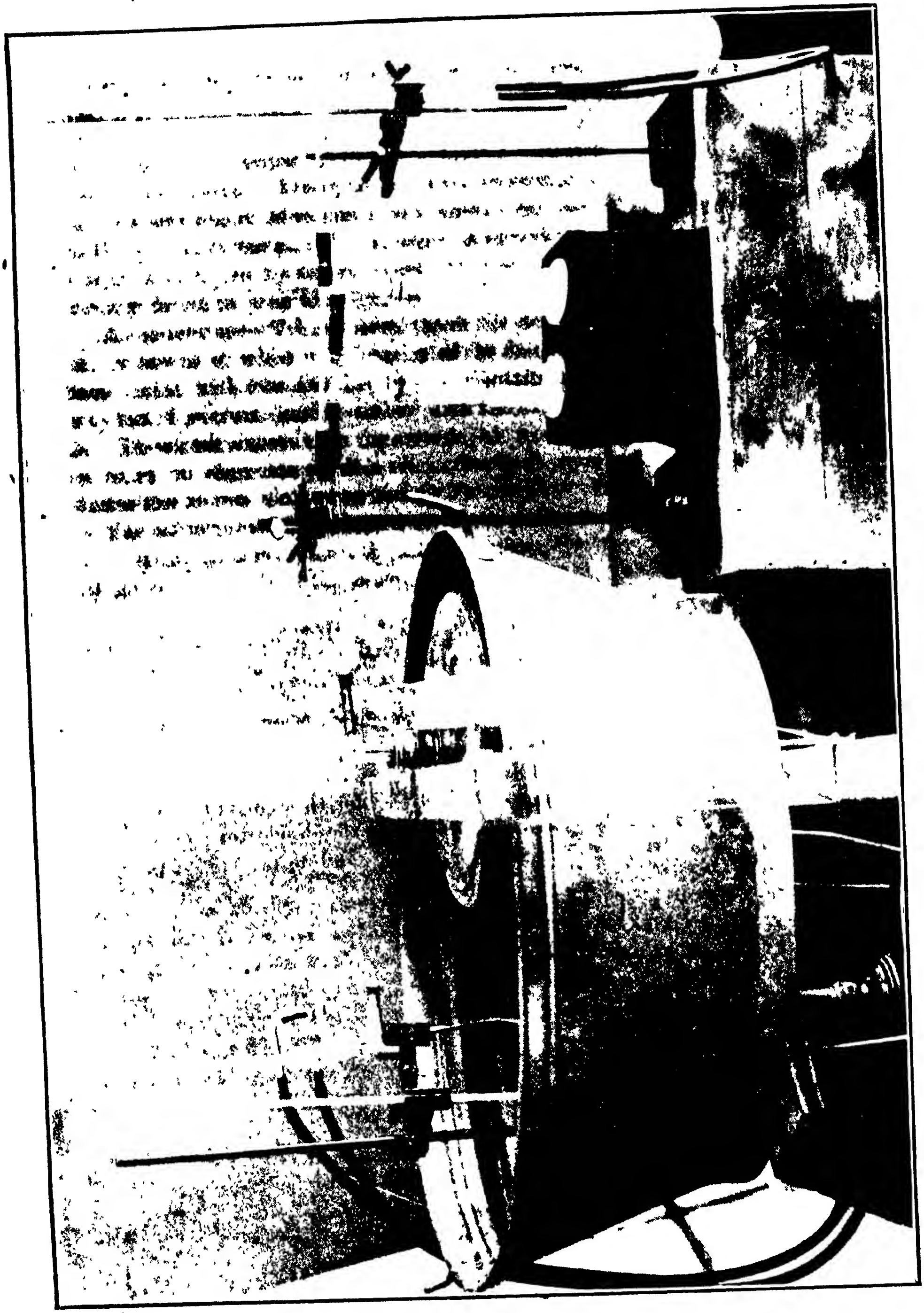
II. Experimental Apparatus and Methods: Sources of Error.

1. Small-Scale (Desiccator) Apparatus.

(a) *General.*

For the small scale work it was necessary to design a piece of apparatus from which samples of the atmosphere could be taken from time to time as desired. The first method tried was to generate HCN in a large desiccator of which the pressure was taken by a mercury manometer, and to exhaust the desiccator to a measured partial vacuum, the drawn-off air being passed through absorbent solutions in Drechsel bottles. This method failed, however, as it was not found possible to render the apparatus sufficiently gas-tight to maintain the partial vacuum for any long period. it was found that the Drechsel bottles were not gas-tight under these conditions, although other parts of the apparatus were effectually sealed. As a consequence it was not possible to measure the amount of air withdrawn from the desiccator by the reading of the manometer. The same difficulty would have occurred if an aspirator had been attached to the end of the washing-bottles for the purpose of reducing the pressure in the desiccator; the volume of the water run out of the aspirator would, of course, have measured the volume of the air which had leaked into the apparatus as well as the volume of air withdrawn from the desiccator. This trouble of leakage might have been overcome but even so the aspirator method would not have been so good as that actually adopted (as described below), because successive determinations in a single experiment would have involved rarefy-

PLATE XXII.



Small-Scale Fumigation Apparatus.

ing or diluting the desiccator atmosphere, which could not therefore have been maintained at even an approximately constant composition (mass of HCN per c.c.) throughout the experiment.

Another method was therefore sought in which the required sample of air was driven out positively. In connection with the large-scale experiments, which were carried out n a barge, it had been feared that some water might leak into the barge and, lying in the bottom of the barge, might dissolve a great deal of the HCN generated. Some experiments had therefore been undertaken on the absorption of HCN by various liquids with a view to finding if possible a liquid which could be used to seal off any such water in the barge from the HCN-containing atmosphere. Such a liquid, besides being lighter than and non-miscible with water, had also of course to be non-absorptive of HCN. Pure liquid paraffin had been found satisfactory in this respect. Pure liquid paraffin was accordingly tried as a displacing liquid to drive samples of the air out of the desiccator and through the gas-washing bottles. This method proved quite successful. With the simple piece of apparatus which was devised, experiments could be carried out accurately and expeditiously, with the maintenance at the same time of a more complete control over the experiment than is possible in large-scale experiments. Its use overcame the greatest difficulty encountered in the large-scale experiments, *viz.*:—that of making the apparatus gas-tight.

Briefly, the method adopted consists of generating HCN in a large desiccator containing the weevils, etc., and of taking samples of the gas at subsequent intervals by driving out a known volume of the gas through washing-bottles containing a solution which absorbs the HCN present. The gas is driven out of the desiccator by replacing it by an equal volume of pure liquid paraffin. It may here be observed that the first determination of HCN-concentration was invariably made about a quarter of an hour after the generation of the HCN ; for the remainder of the experiment the displacing liquid covered the bottom of the desiccator, presenting a large absorptive surface to the atmosphere therein. And as a single experiment usually extended over many hours, during which a number of determinations of HCN-concentration were made, it was very important that the displacing liquid used should be almost completely non-absorptive towards HCN. It was actually found that other similar liquids—kerosene, and liquid paraffin which was not of the highest degree of purity—did in fact absorb HCN very slightly, but to a sufficient extent to render them useless as displacing liquids.

(*b*) *Description of the Small-Scale Apparatus.*

Reference to Fig. 1 and Plate XXII will make clear the *modus operandi* of the test. F is a porcelain plate ; it rests on the shoulder of the desiccator G and contains 6 holes on which a number of crucibles E may be placed. In each crucible E is placed a given charge of sodium cyanide, usually either 0·05 or 0 10 gram. HCN is generated

by running a few drops of concentrated * sulphuric acid through the tap B of the funnel A, whose stem passes through the rubber cork C to the interior of the desiccator G. The bent tube D is attached by rubber tubing to the stem of the funnel A inside the desiccator. The connection of rubber tubing is placed as near to the cork C as possible. The tube D is bent in such a way that by turning the funnel A the lower end of D swings round for the purpose of delivering liquid above any of the 6 holes in the plate F ; in any one experiment not more than 5 of these holes would be occupied by the crucibles, at least one hole being kept clear for the displacing liquid to pour through.

A delivery tube T leads from the desiccator through cork C to a three-way tap H, by means of which the interior of the desiccator may be put into communication either with two Drechsel washing-bottles K and L, or with a second three-way tap M communicating either with the external air or with a water-manometer N. These connections with the external air and with the manometer are necessary in order to eliminate possible errors due to changes in the temperature or pressure during the course of an experiment.

The following are the dimensions of the different parts of the apparatus :—

Desiccator G · Inside diameter 10 inches.
Capacity 10·7 litres.

Crucible · Diameter at top 1·1 inch.
Depth 0·8 inch.
Capacity 6 c.c.

Drechsel bottles : Capacity 8 oz. each.

NOTE.—A volume of 100 c.c. of solution in a Drechsel bottle gives a pressure-head of 2 inches.

(c) *Possible Sources of error.*

1. *Volume of HCN generated.* With a charge of 0·10 gram of dry sodium cyanide, the volume of HCN produced in Bombay is about 50 c.c., so that with such a charge the pressure inside the desiccator rises after the generation of HCN by about one two-hundredth, even when the heat generated by the reaction has been dissipated. This error was avoided by equalizing the internal and external pressures of the desiccator before making the first determination of HCN-concentration, as described hereafter (page 81). If this had not been done and a volume of 250 c.c. of displacing liquid had been used for the first determination of HCN-concentration, the volume of the emergent gas would have actually been about 300 c.c. instead of 250 c.c.

2. *Temperature and pressure changes.* Owing to the long period over which a single experiment might extend, in the absence of control of the temperature and

* Compare page 94 *et seq.*

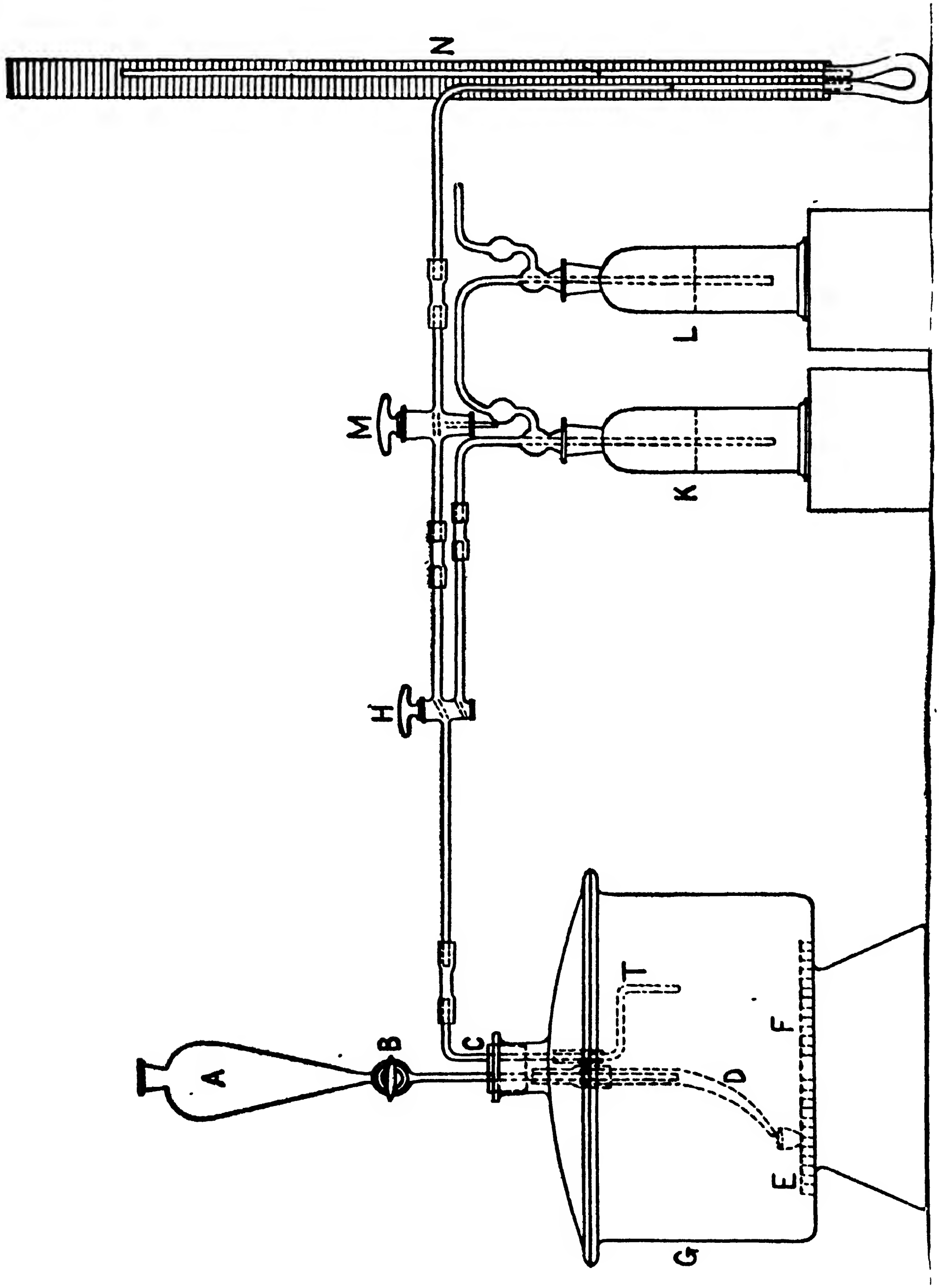


Fig. 1. Small Scale Fumigation Apparatus

pressure different determinations might be made at considerably different temperatures and pressures. In this respect it is very fortunate that normally the temperature and pressure changes in Bombay take place within very narrow limits over fairly considerable periods of time. The volume of the desiccator itself may be taken as constant, for the effects produced by changes in the temperature and pressure on the volume of the desiccator are negligibly small compared with their effects on the enclosed air. A simple calculation shows that, with constant volume, for every 1°F. rise or fall in temperature there is a corresponding increase or decrease of approximately one five-hundredth of the internal pressure; this amounts to about 0·06 inch mercury and is the equivalent of a volume of about 20 c.c. of the air within the desiccator. If therefore between two determinations the external temperature had fallen as much as 10°F., and the internal temperature had adjusted itself to the external temperature when the second determination was made, there would have been a partial vacuum inside the desiccator and 200 c.c. of the 250 c.c. displacing liquid would have been used in compensating for this partial vacuum, and instead of 250 c.c. only 50 c.c. of air would have been driven out. With a rise in temperature of 10°F. between two determinations the volume of air driven out would have been 150 c.c. instead of the 250 c.c. of the displacing liquid. Similar disturbances would have resulted if between any two determinations of concentration there had been a rise or fall respectively of 0·6 inch mercury in the external pressure. It will be observed that whether the change in the external physical conditions is one of temperature or pressure it finds expression in a change of pressure within the desiccator; to eliminate changes due to either, therefore, all that was necessary was to provide a means whereby the internal and external pressures could be equalized just before a determination was made of the HCN-concentration.

3. *Secondary sources of error.* There remain three other difficulties of a secondary nature. The first is presented by a fall in the external temperature or a rise in the external pressure between successive determinations of HCN-concentration. This would show itself on the manometer as a partial vacuum in the desiccator. To relieve this vacuum it would be necessary to admit air; this admitted air might cause trouble in two ways:—(1) It would of course dilute the air in the desiccator. The extent of dilution is readily calculable from the pressure readings of the manometer, and in all normal cases its effect would be negligible. (2) As the sample of air is taken immediately after the equalization of pressures, the air within the desiccator would probably not be of uniform composition so that the air driven out might not be a true sample. The possible error from this source is comparatively large; from the reading of the manometer its higher limit could be calculated, and this would, of course, be equal to the error involved if no equalization of pressures were made. On this account, if any large pressure difference were encountered, the best method to adopt would be to make the equalization of pressures a number of times at short intervals *between* each pair of the determinations of HCN-concen-

tration; in this way the difference between the internal and external pressures would never be very great. Alternatively, the equalization of pressures could be effected by running liquid paraffin into the desiccator through the funnel A, using the manometer to measure the rate of equalization. So far as the partial vacuum was due to temperature changes, it could be avoided by keeping the desiccator in a constant-temperature bath. The first method could not conveniently be used in experiments of long duration, as it was during the night, of course, that falls of temperature were most commonly experienced. The third method was actually used in absorption experiments with cotton and jute, as will be explained later. The only objection to the second method is that the use of liquid paraffin for equalizing the pressures reduces the volume available for making determinations of concentration. This method was not used at the Technological Laboratory because, in general, it was rising and not falling temperatures which were experienced, due to each experiment being started fairly early in the morning. The occasional falls in temperature which were experienced were demonstrably not serious owing to their small magnitude.

The second difficulty to which reference was made above is that the displacing liquid might be at a slightly different temperature from that of the desiccator. There would, of course, at once be a tendency towards temperature-equilibrium between the liquid and the desiccator: at the same time, there would be a tendency towards a temperature-equilibrium between the whole system and the external air. These changes in temperature would be accompanied by volume changes which would be negligible for the liquid and the desiccator but not necessarily so for the contained air. The temperature changes in the Technological Laboratory were, however, over such a small range and took place so slowly that no great error would be introduced in this manner, as was confirmed by some subsequent experiments on the point, when the temperatures of the liquid paraffin were found not to differ by more than 0·5°F. from the temperatures in the desiccator.

The third difficulty might arise from the comparatively rapid adjustment of pressures on equalizing the internal and external pressures. If the internal pressure had risen relatively to the external pressure between two determinations of HCN-concentration, then on equalizing pressures there would have occurred expansion of the air inside the desiccator accompanied by some cooling, assuming the expansion to have been so rapid as to have been approximately adiabatic. During the running-in of the displacing liquid, therefore, the temperature of the air in the desiccator would have gradually risen and a larger volume of air than that of the displacing liquid would have been driven out. In point of fact, owing to the very small bores of the tubes and of the three-way taps, the expansion of the air within the desiccator is far from being purely adiabatic; moreover, about 2 minutes may be taken up in reaching a position of final equilibrium between the internal and external pressures; and lastly, even if the expansion were purely adiabatic, the

adiabatic effect could not be more than 29 per cent. of the expansion which would result from the original temperature and pressure changes.

To determine the magnitude of any such adiabatic effect, some observations were actually made with the desiccator, using excess internal pressures of the order of the maximum of those occurring in the fumigation experiments. First, the pressure inside the desiccator was brought to the desired excess above the external pressure: next, three-way tap M was turned so as to put the desiccator into communication with the external air ("air-communication") for a given period. Tap M was then turned so that communication was resumed between the desiccator and the manometer ("manometer-communication"); this caused the water in the manometer to oscillate for about 6 seconds before it settled down. The subsequent movement of the water levels in the manometer showed that the internal pressure gradually rose as thermal adjustment set in. In all cases the water came practically to its final equilibrium level within half a minute of the resumption of manometer-communication. With the very short air-communication of 1 second (approx.) the equilibrium position after manometer-communication was attained within 10 seconds. With air-communications lasting 5 or 15 seconds nearly half a minute was required for equilibrium after manometer-communication; for the longer air-communication of 30 seconds equilibrium was again attained in about 10 seconds after manometer-communication. From these results it is clear that thermal adjustment is complete in about three-quarters of a minute after the beginning of the period of air-communication.

The curious differences between the times needed for thermal adjustment after manometer-communication for varying periods of air-communication may be traced to two distinct factors being involved the first being the period of time necessary for the pressure-equilibrium to be established, and the second being the period of time necessary for the temperature-equilibrium to be established. As shown below, about half a minute is required to release the pressure within the desiccator owing to the small bores of the three-way taps etc. If the equalization of pressures occurred under purely adiabatic conditions and the subsequent thermal expansion took place entirely after manometer-communication, the fall of pressure within the desiccator experienced by the time temperature-equilibrium had been re-established should be 71 per cent. of the initial excess pressure. Values actually obtained for different periods of air-communication were very different from this, *viz.*:—

Period of air-communication (seconds)	Fall of pressure (per cent of initial excess pressure)
1	18
5	47
15	83
30	94

From these experiments it is clear that air-communication for rather more than half a minute is needed for the equalization of pressures. and that the thermal adjustment occurs in about three-quarters of a minute after the beginning of the period of air-communication. These results afford an explanation of the various times already referred to as being necessary for thermal adjustment after manometer-communication. In the 1 second air-communication experiments, only a fraction of the air within the desiccator had time to escape, so that the cooling effect was small and the thermal adjustment was consequently comparatively rapid. In the 5 seconds and 15 seconds air-communication experiments, the expansion was fairly considerable, with a fairly large cooling effect, so that nearly half a minute was necessary for thermal adjustment after manometer-communication. In the 30 seconds air-communication experiments, pressure-equilibrium was practically established and the greater part of the thermal adjustment must have taken place during the air-communication itself and before the manometer-communication was made. Thus the short periods required for establishment of equilibrium after manometer-communication in the 1 second and in the 30 seconds experiments are satisfactorily explained, although they arise from different causes.

In view of these results it will be seen that the procedure adopted to eliminate the various possible errors did in fact avoid this adiabatic error as well as the other errors to which attention has been drawn. This procedure will now be described.

(d) *Description of an Experiment in the Desiccator Apparatus.*

The charge of powdered sodium cyanide—0·10 gram—is spread evenly over the bottom of the crucible E and the latter set in position in the desiccator. In each of the washing-bottles K and L is placed 100 c.c. of the absorbing solution $\frac{N}{5}$ caustic soda, 100 c.c. containing 0·1 gram potassium iodide). The lid of the desiccator is then placed in position, the rim being well covered with vaseline so as to make the joint with the body of the desiccator gas-tight when the lid is pressed down. The delivery tube T is then connected with the tube attached to the three-way tap H. The rubber cork C and the exterior rubber connections are well covered with a gas-tight mixture made by melting together 30 parts of beeswax and 40 parts of vaseline, and then adding to the mixture 15 parts of powdered resin and stirring. 0·3 c.c. of concentrated sulphuric acid[1] is placed in the funnel A. This quantity of acid is in large excess for the charge of cyanide, first because some of the acid is inevitably left on the internal wall of the stem of the funnel A, and secondly because it is desired to ensure that, if possible, no undecomposed cyanide shall be left in the crucible.

Tap H is put in communication with tap M, which is itself put into communication with the air in order to equalize the internal and external pressures ; tap H is

[1] Compare, however, page 96.

then closed; next, tap B is turned and the sulphuric acid allowed to run into the crucible E fairly quickly in successive drops. A violent action at once ensues, small clouds of vapour being evolved, but with the last drop or two no action is apparent; after a short time taps H and M are opened for air-communication and pressure-equalization. Tap H is then closed once more and a small quantity (2 c.c.) of liquid paraffin is run into the crucible E, where it floats upon the liquid already present and thus seals it off from the atmosphere within the desiccator. The funnel A with its stem is then turned round so that the bottom of tube D is directly above the unoccupied hole in plate F. Next, the wax mixture on the cork C is partially melted by pressing on to it a heated rod; the wax on resolidifying effectually seals this part of the apparatus. A quarter of an hour is invariably allowed to elapse before any determination of the concentration of the gas is made; this is to allow the atmosphere inside the desiccator to become of practically uniform composition by the process of diffusion. That this period of time is sufficient for the purpose is indicated by the fact that in blank experiments no material difference normally occurred between the first and subsequent determinations of the HCN-concentration of the atmosphere of the desiccator.

When any estimation is to be made of the composition of the desiccator atmosphere, the desiccator is put into communication with the manometer N by taps H and M. If the manometer shows the existence of any difference of pressure between the external atmosphere and that inside the desiccator, tap M is turned so as to put first the manometer and then the desiccator in communication with the external air. After a few seconds tap M is turned so as again to put the desiccator in communication with the manometer N. If after one minute the reading of the manometer shows that the pressure inside the desiccator is equal to atmospheric pressure, the experiment can be proceeded with; if, as is usually the case, equilibrium is not attained at the first attempt, tap M is again turned so as to put first the manometer and then the desiccator in communication with the external air, after which manometer-communication is re-established, and so on, the process being repeated until the reading of the manometer N shows that the pressure inside the desiccator G is the same as that of the external air. When this has been accomplished (the whole process is complete in two or three minutes) the tap M is closed and tap H is put into communication with the Drechsel washing-bottles K and L. A measured volume of pure liquid paraffin is now run into the desiccator through the funnel A. This drives out of the desiccator an equal volume of the air inside, which is thereby caused to bubble through the solutions in the washing-bottles K and L. A volume of 500 c.c. of liquid paraffin was generally used for each determination in the earlier experiments, but in later experiments only half of this quantity, *viz.*, 250 c.c. was most frequently used.

A difficulty arises towards the end of each determination because the atmosphere in the desiccator is obviously subjected to an excess pressure equal to the sum

of the heads of the solutions in washing-bottles K and L. There are various means by which this difficulty might be overcome. The one actually adopted is gradually to lower the bottles away from their delivery tubes so that the head of liquid is gradually reduced to zero. First the bottle L is slowly lowered so that the rate of bubbling through the solution in bottle K remains approximately the same as during the previous part of the determination (1 to 2 bubbles per second). The bottle L is then placed on one side and the bottle K slowly lowered in its turn. The chief objection which can be raised to this process is that the reduction in the head of liquid through which the driven-out gas has to pass gives rise to the possibility that the last few bubbles may not pass through sufficient liquid to have their HCN removed. It is, however, quite easy to show that, providing due care is taken and the rate of bubbling always kept slow, the possible error arising from this source is negligible.

The solution in bottle K is now titrated against silver nitrate solution, of strength 0·569 gram $AgNO_3$ per 1,000 c.c. solution. This strength is only about one-third centinormal strength and considerable care is necessary in the determination of the end-point of the titration. The method actually employed is to cause a beam of light to pass through the flask containing the solution being titrated, which is viewed against a black-paper background. The appearance of a faint permanent opalescence indicates the end of the reaction. If x denotes the number of c.c. of the silver nitrate solution used in the titration, and if 500 c.c. of liquid paraffin have been used for the estimation, *i.e.*, if 500 c.c. of air have been passed through the solution in bottle K,—then $(x \times 30)$ is the number of parts of HCN by volume per 100,000 parts of the atmosphere within the desiccator, at normal temperature and pressure. If 250 c.c. of liquid paraffin have been used for the estimation, then the number of parts of HCN by volume per 100,000 is given by $(x \times 60)$.

In any estimation the burette reading of silver nitrate solution is always observed to the nearest 0·05 c.c. If we assume the reading to be accurate to 0·1 c.c. only, it follows that the determination of HCN-concentration can only be accurate to 3 or 6 parts per 100,000 according as the volume of displacing liquid used is 500 c.c. or 250 c.c. respectively. Throughout this memoir all the values for HCN-concentration in parts per 100,000 by volume are given as at normal temperature and pressure, no correction being made for the temperature or pressure actually prevailing. It follows that these values are strictly proportional in each case to the mass of HCN per unit volume. And seeing that it is the mass of HCN per unit volume which presumably determines the lethal power of the gas, no real advantage would accrue from making the temperature-correction which would be necessary for each estimation. It may be added that as the temperature-correction is about 0·2 per cent. for every 1°F., the actual HCN-concentrations by volume at the temperatures prevailing in these experiments would be about 10 per cent. greater than at normal temperature; but the differences in temperature for different experiments were relatively small, so that direct comparisons of the HCN-concentrations could be

made legitimately. The same is true as regards the pressures experienced during different experiments.

The Drechsel washing-bottle L functions as a guard. Its contents are, however, titrated similarly to those of bottle K, but should give a permanent opalescence immediately the silver nitrate solution is added. If this is not the case, the reading obtained with the solution from bottle L must of course be added to that obtained with the solution from bottle K before the calculation is made of the HCN-concentration.

The material being fumigated was suitably arranged on the shoulder of the desiccator as nearly as possible symmetrically with regard to the crucible containing the charge of sodium cyanide. For example, when weevils were being experimented with, 3 small tins were arranged at the corners of a equilateral triangle and as nearly as possible symmetrically situated with regard to the crucible. Each tin had a diameter of 2 inches and was 0 6 inch deep ; its lid was 0·4 inch deep and had a top of fine copper gauze having 60 wires to the inch. In any experiment 20 weevils were, if available, placed in each tin.

2. One Bale-Scale Experiments.

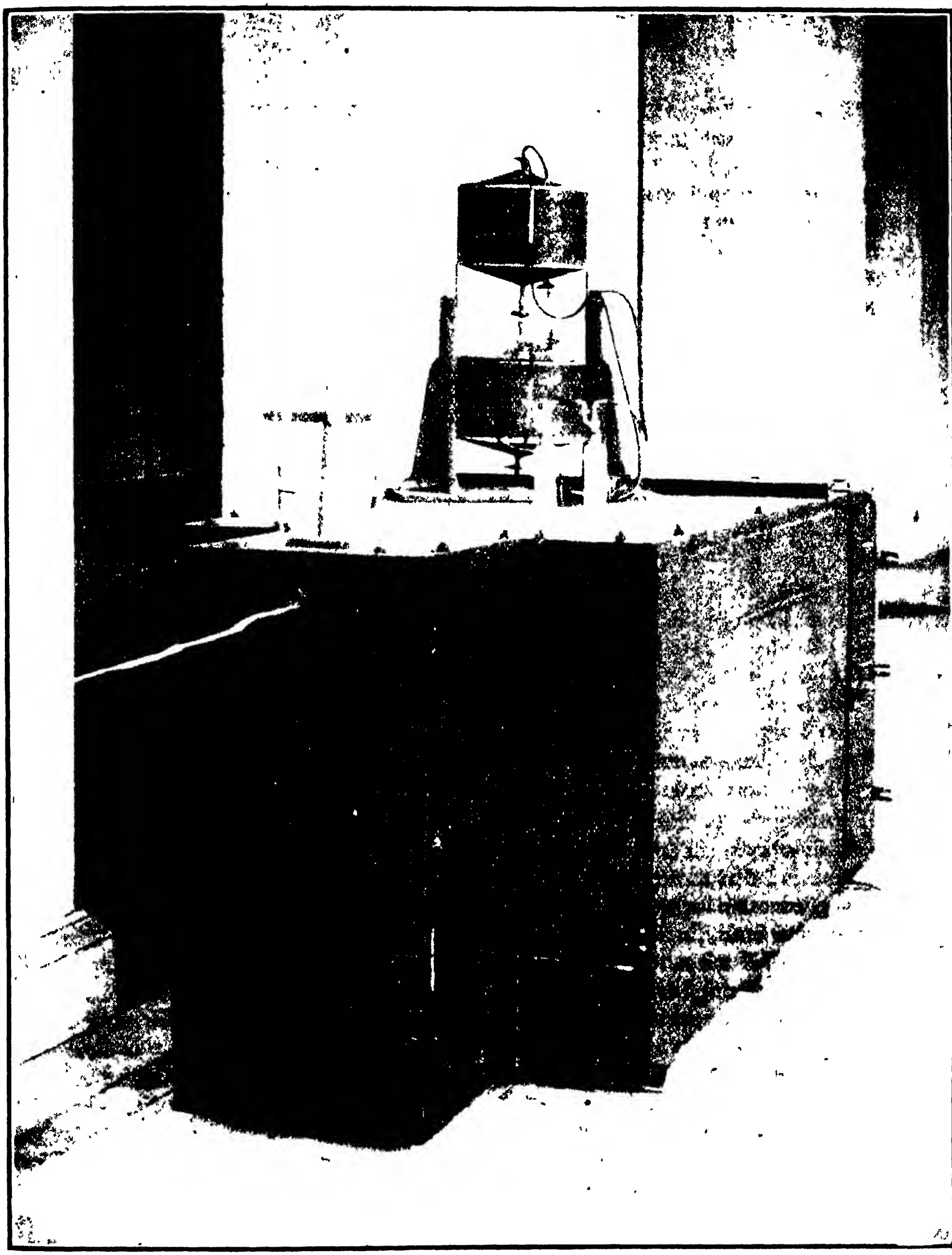
These experiments were first of all carried out in a large wooden chamber, and afterwards in a steel cylinder.

(a) *Wooden Chamber Experiments.*

The wooden chamber was made out of 1½ inch teak : the internal dimensions were 5 ft. long × 3 ft. high × 3 ft. wide, giving a total capacity of 45 cubic feet; at one end, however, was a small additional compartment, 1 ft. 4 ins. deep × 1 ft. 4 ins. wide, extending the full height of the box. (Fig. 2 and Plate XXIII.) The total capacity of the wooden chamber was thus increased to 50·3 cubic feet. At the opposite end to this extension was fitted a door, which was made to close on to strips of felt fitted to the chamber, with a view to preserving the air-tightness as far as possible.

The extension was for the purpose of accommodating a tray E in which solutions of sodium cyanide and sulphuric acid could be made to interact: two glass tubings D, D′ led to the tray direct from the outside of the top of the extension, the respective solutions being poured into funnels A, A′ situated outside the chamber and attached to these glass tubings by rubber tubings B, B′ on which were screw clips C. C′ for controlling the rate of flow of the solutions. A small fan F was also placed in the extension for the purpose of aiding the circulation of gas.

The arrangement for sampling and testing the atmosphere within the chamber was similar to that used in the Liston's Cyanide Fumigator, described on page 89,



Wooden Chamber for Fumigation Experiments.

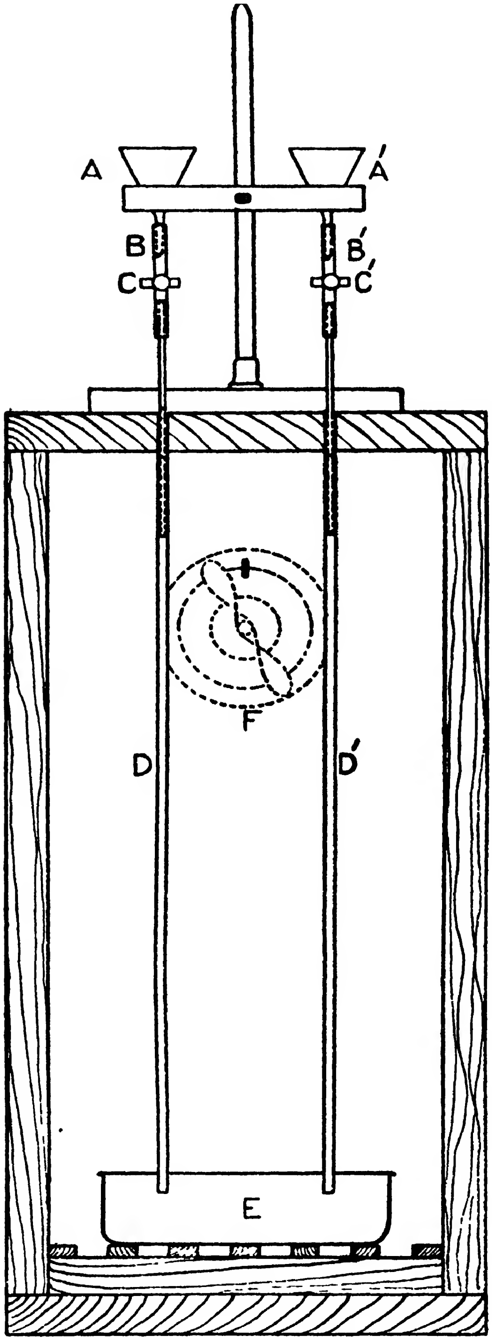


Fig. 2. Section of Extension of Wooden Chamber.

and is illustrated in Fig. 3 (also Plates XXIII and XXIV). It consists essentially of two copper vessels A, A′, each having a capacity of one half of a cubic foot, stayed one above the other and connected in series by a tube in which is a cock B ; a hinged clip J holds the two vessels in position on a wooden frame. The vessels are fitted with cocks F, F′ and G, G′, and by means of rubber tubing C, C′ are connected, through a T-piece D and two Drechsel gas washing bottles E, E′, with the interior of the wooden chamber. Each washing bottle contains the alkaline solution to absorb HCN ($\frac{N}{5}$ caustic soda, 100 c.c. containing 0·1 gram potassium iodide). For a determination of the HCN-concentration in the chamber, cocks F′, B, G are closed, the upper copper vessel A is filled with water through tap F and the connections made, tap F being left open. Cocks G′ and B are then opened, thus allowing the water to flow from the upper vessel to the lower ; this causes an equal volume of air to be drawn from the wooden chamber through the washing-bottles. When the whole of the water has run into vessel A′, the washing-bottles are disconnected, and the solutions in them titrated with standard silver nitrate solution (10·828 grams $AgNO_3$ per 1,000 c.c. solution). If x c.c. of this solution are used in the titration then ($x \times 20$) represents the number of parts of HCN by volume per 100,000 parts of the atmosphere within the wooden chamber as at normal temperature and pressure. For the next determination all taps and cocks are closed, the rubber tubing disconnected from taps F, F′, and the positions of the copper vessels reversed by revolving the apparatus on pins H, H′ ; thus the lower vessel containing the water run in from the last determination now becomes the upper one, and *vice versa* ; fresh solutions are placed in the washing-bottles, the connections of the rubber tubings are again made and all is ready for a further determination.

Experiments were carried out in this chamber to determine the lethal concentration of HCN necessary for *Sitophilus oryzae* and the extent to which a cotton bale absorbed HCN. The chamber had to be extended in length by one foot at a later date in order to accommodate a bale of cotton. Its internal volume was thus increased to 59·3 cubic feet.

(b) *Steel Chamber Experiments.*

The wooden chamber proved unsatisfactory after a time (page 129) and a new chamber was therefore obtained of a cylindrical shape, made from quarter-inch steel sheets welded together, and having for one end a steel sheet door which could be securely clamped in position (Fig. 4 and Plate XXIV).

The cylinder was 6 feet long and 3 feet 9 inches in diameter, having a capacity of 66 cubic feet. The arrangements for generating the HCN and sampling and testing the atmosphere inside the tank were similar to those used in the case of the wooden chamber. A slight modification was made as regards the glass tubings D, D′, through which the interacting solutions were added ; these tubings were bent near their lower ends and then fixed in a cork G so that the issuing solutions should impinge on one another, and thus be well mixed.

Steel Chamber for Fumigation Experiments.

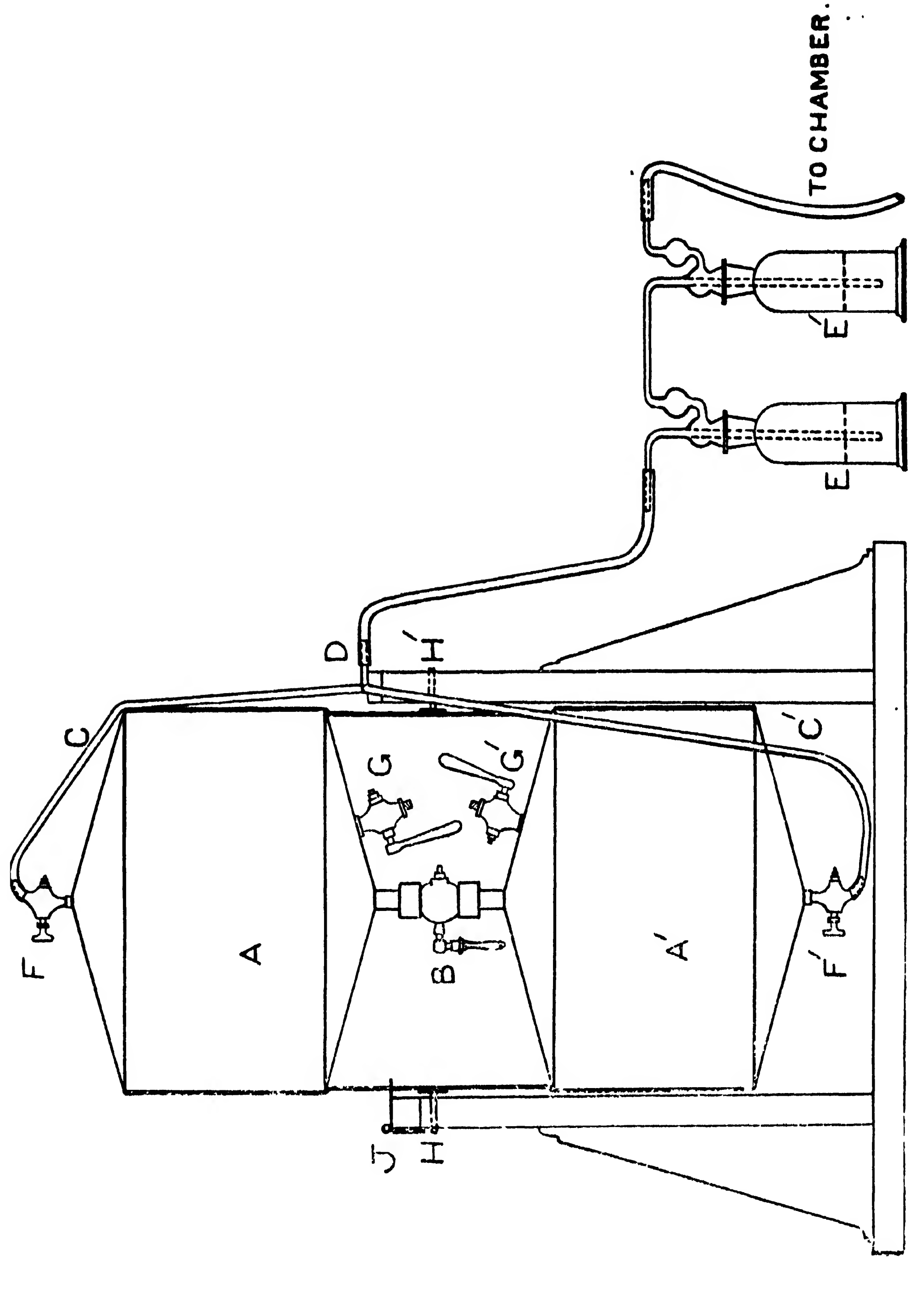


Fig. 3. Sampling Apparatus in Chamber Experiments.

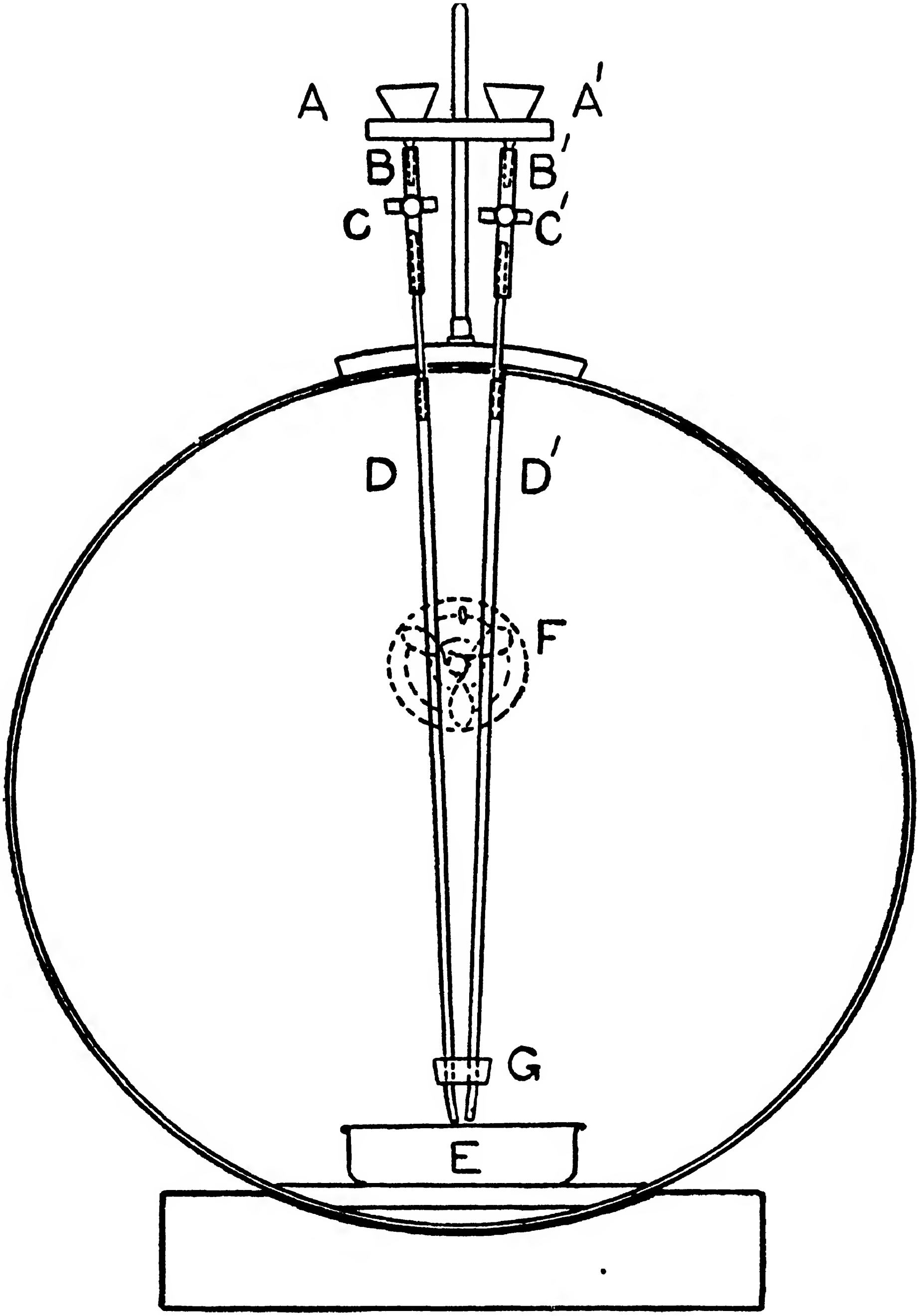
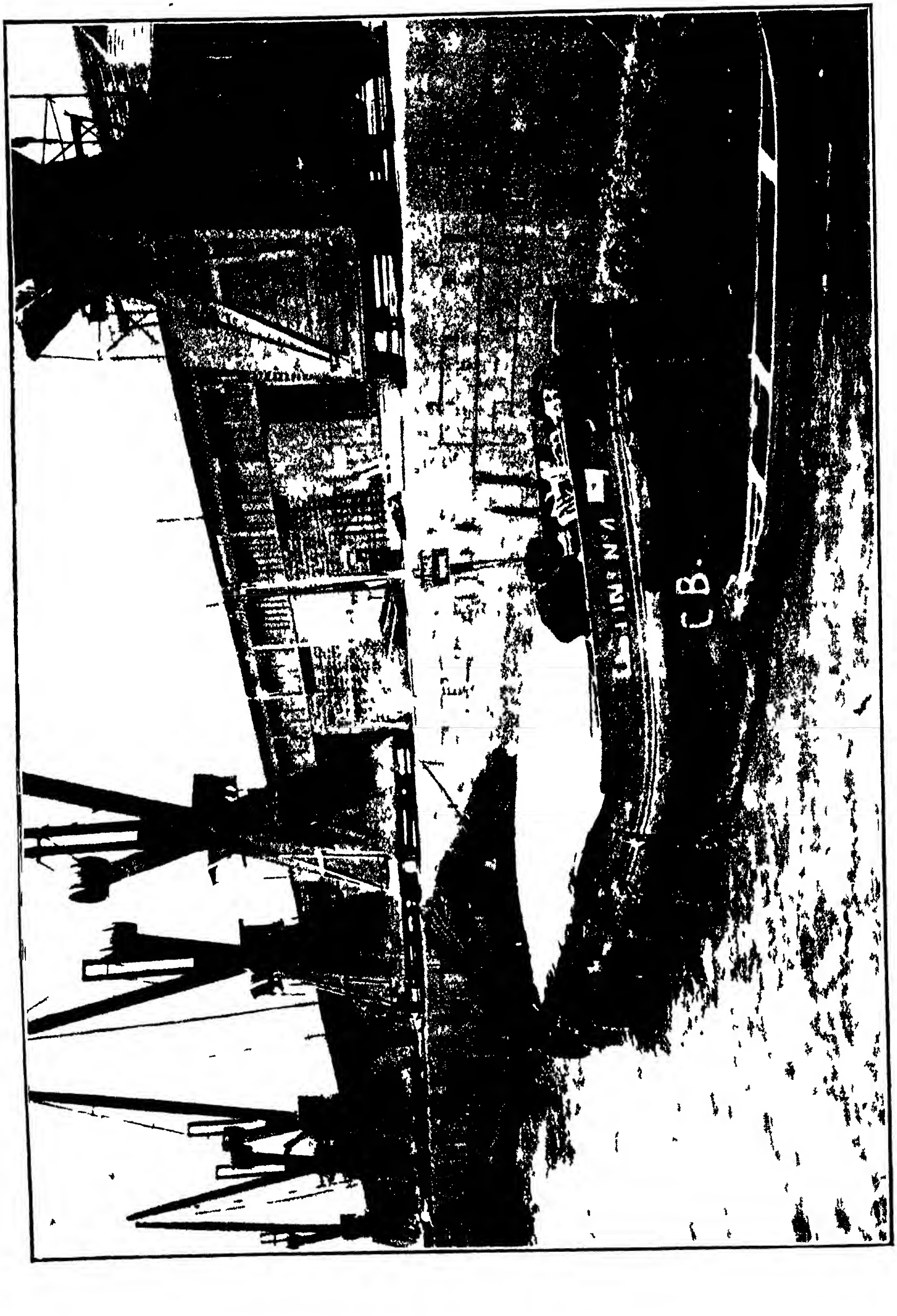


Fig. 4. Section of Steel Chamber.

PLATE XXV.



Full-Scale Fumigation Experiments in Barge.

3. Full-Scale Experiments.

The full-scale experiments were carried out on a steel barge supplied by the Bombay Port Trust. The barge had two holds, only one of which was used. This hold had a capacity of about 3,000 cubic feet. For generating the HCN a Liston's Cyanide Fumigator was used, which was placed under a temporary shelter at one end of the barge.

The following account of the fumigator is based on the description given in the paper by Liston and Goré[1] (Figs. 5, 6, 7 and Plates XXV, XXVI and XXVII). The fumigator consists of a box A in which the HCN is generated. On the lid of this box a fan B, a petrol motor C with petrol tank W, and a chemical cabinet D are fixed. The petrol motor is capable of driving the fan at 3 600 R.P.M., and at this rate of revolution the fan can deliver 1,200 cubic feet of air per minute along a length of pipe at a pressure of 6 inches on a water gauge. In the chemical cabinet are two glass containers E, E′ made from Winchester quart bottles from which the bottoms have been removed. The inverted bottles are placed in a stand F. The mouth of each bottle is fitted with a rubber cork G, G′ through which passes a glass tube H, H′. These glass tubes are for the purpose of conducting the solutions placed in the respective containers to the generating box, in which the two solutions are caused to react with one another. The glass tubes are therefore respectively connected by rubber tubings K, K′ on each of which a screw clamp L, L′ is fixed, to two other glass tubes, M, M′ passing through a large rubber cork N inserted in a hole in the top of the generating box. The latter glass tubes overhang a small platform or channel O which is fixed below the cork and which has a slight slope towards the side of the box. The sloping channel is fitted with small baffle plates. so that the solutions flowing from the containers are thoroughly mixed as they flow along the channel. One container E is reserved for a solution of sodium cyanide, and the other E′ for a strong solution of sulphuric acid. A slightly hollowed and perforated lead cover P, P′ is placed over the upper end of each bottle. These covers serve to strain off particles of matter (sawdust, etc.) which may be suspended in the solutions and which might otherwise block the various tubings ; they also prevent any splashing of the solutions by vibration when the motor is working. The gas is generated by allowing 50 per cent. solutions of sodium cyanide and sulphuric acid respectively to flow at an equal rate upon the sloping channel within the box, by so adjusting the screw clamps on the rubber tubings referred to above that the solutions in the two containers fall at the same rate in line with one another.

The chemical cabinet also contains two copper vessels Q, Q′ which are used to aspirate a measured quantity of the atmosphere from the compartment under treatment. The vessels are of such a capacity as to deliver 5 litres of water from the one to the other, when the small outlets R, R′ fixed near the bottoms of the vessels

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[1] W. G. Liston and S. N. Goré. The Fumigation of ships with Liston's Cyanide Fumigator: *Journal of Hygiene*, vol. XXI, No 3, May 18, 1923.

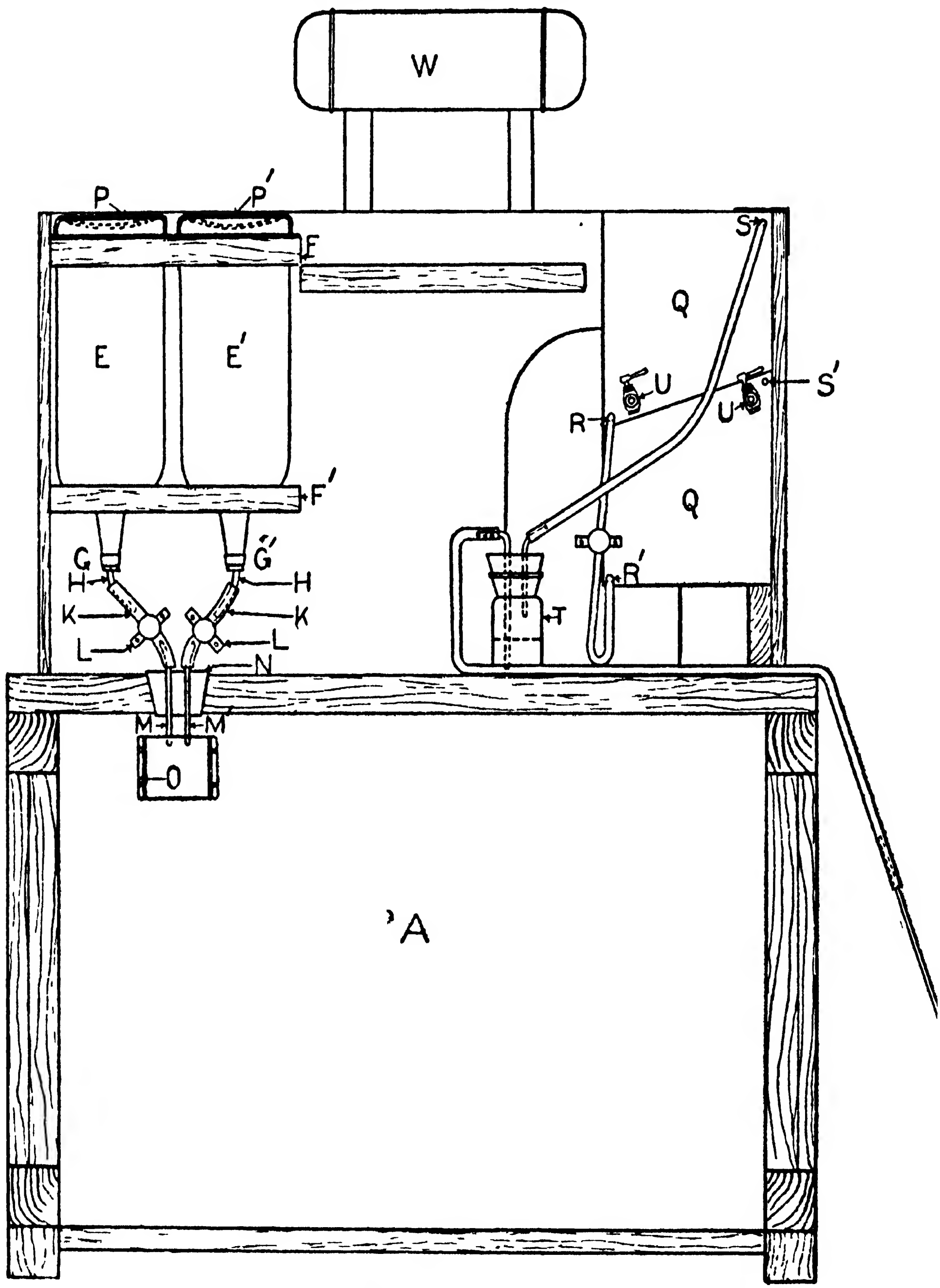
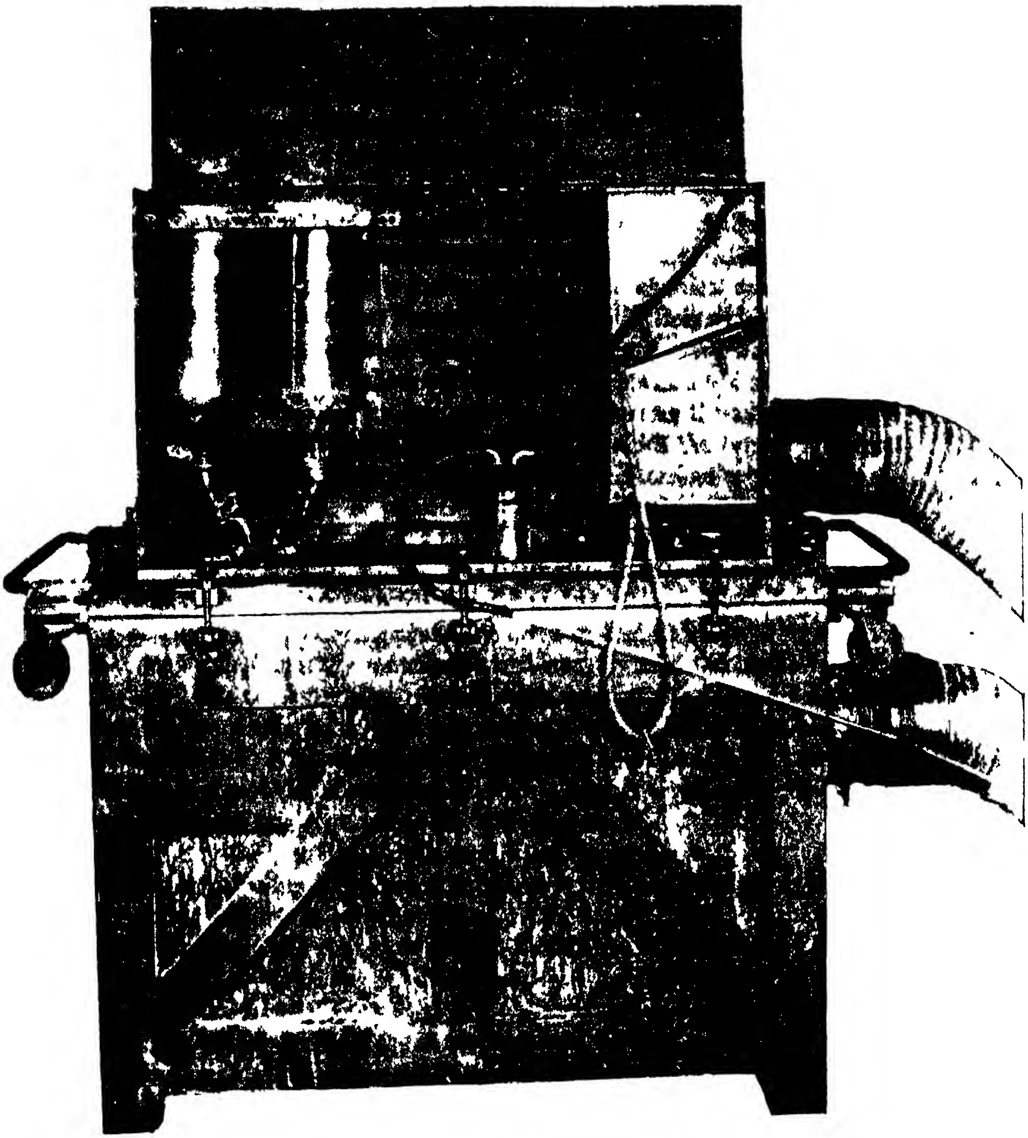


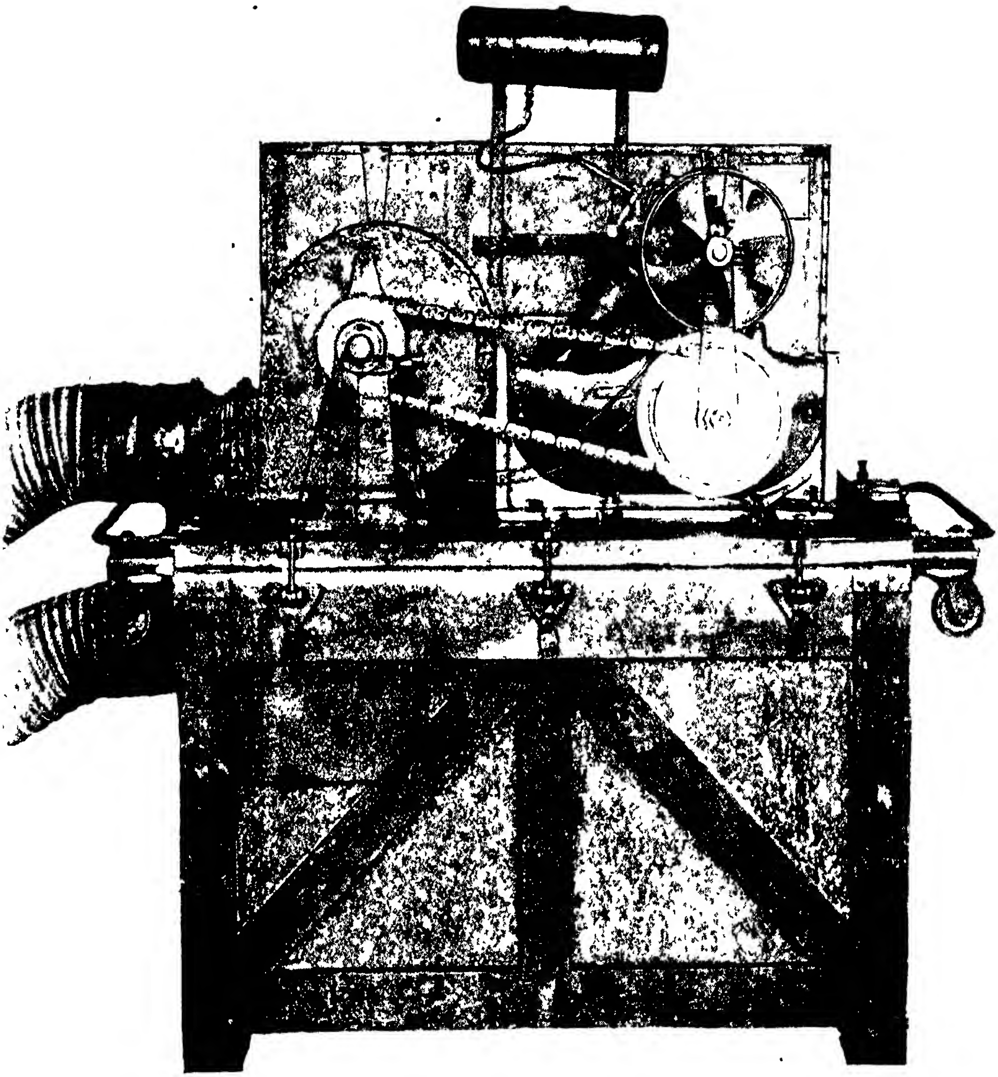
Fig. 5. Side Elevation (Section Through Chemical Cabinet) of Liston Cyanide Fumigator.

PLATE XXVI.



Liston Cyanide Fumigator—showing Chemical Cabinet.

PLATE XXVII.



Liston Cyanide Fumigator—showing Engine and Fan.

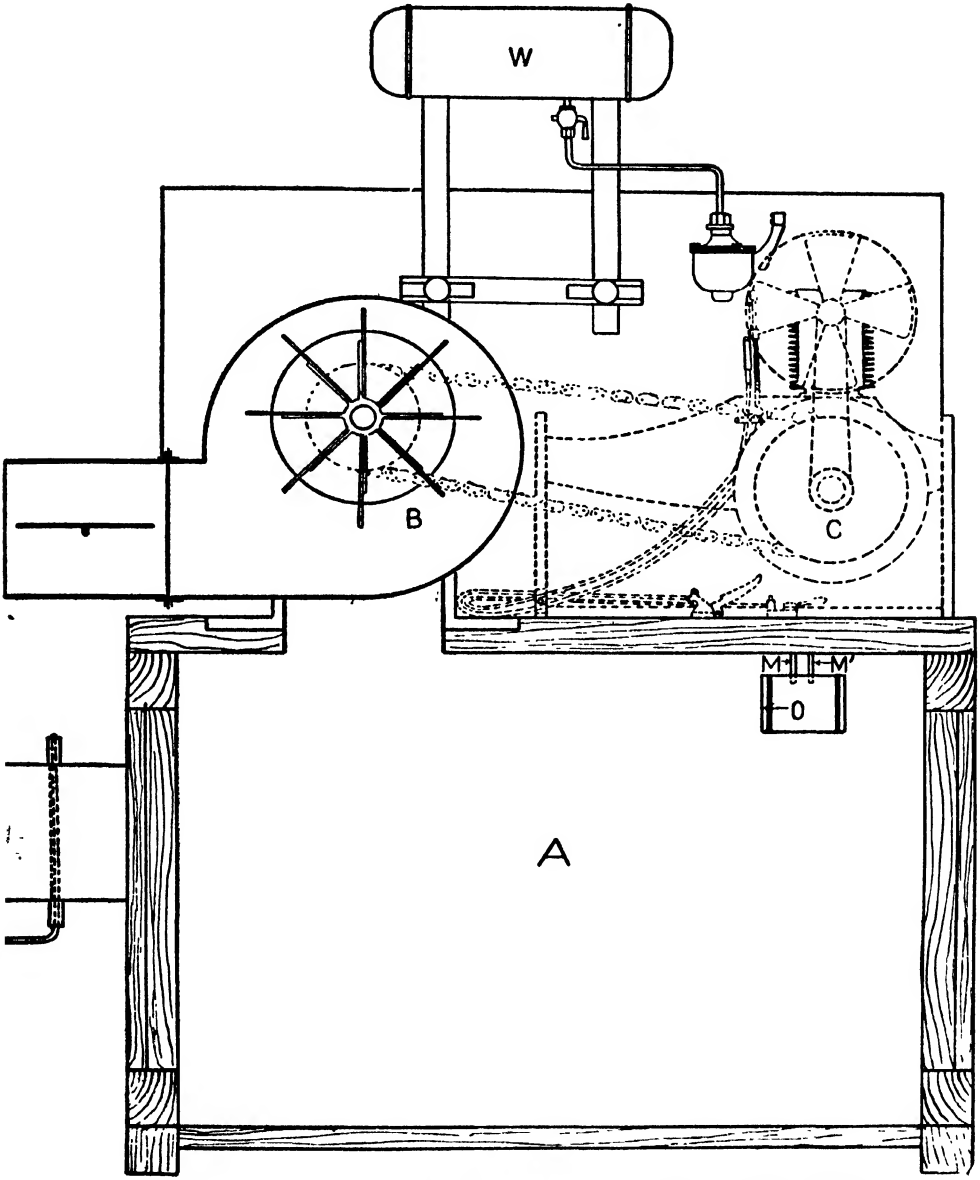


Fig. 6. Side Elevation (Section Through Engine and Fan) of Liston Cyanide Fumigator.

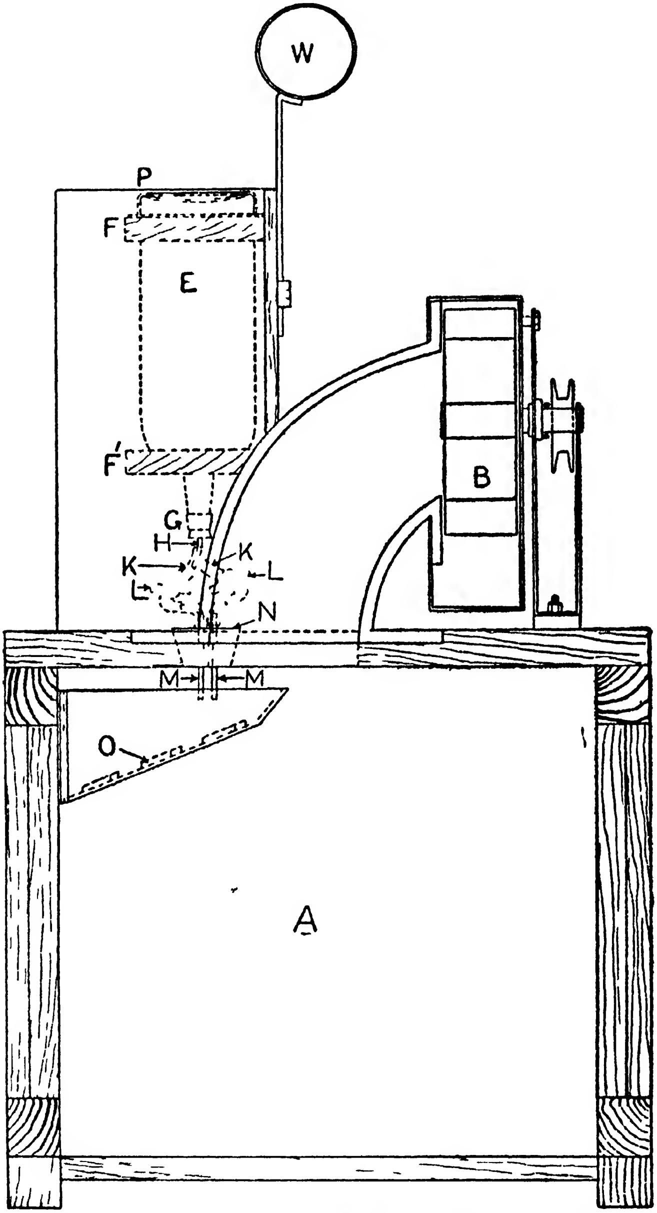


Fig. 7. End Elevation (Section Through Chemical Cabinet and Fan) of Liston Cyanide Fumigator.

are connected together by rubber tubing and when the one containing the water is placed on top of the empty vessel. A small tube S, S′ fixed near the top of each vessel enables either of them to be connected at will to a gas-absorption vessel T. Each vessel is also provided with a tap U, U′. During an estimation U is closed and U′ is open, thus allowing the air in Q′ to be replaced by water from Q The other details and the *modus operandi* are similar in effect to those already described for the sampling and testing apparatus used in the experiments on the one-tale-scale; when the positions of Q, Q′ are reversed, the functions of R, R′ and S, S′ are interchanged.

The strength of the standard silver nitrate solution used in the full scale experiments was 1·897 grams $AgNO_3$ per 1,000 c.c. solution. If x c.c. of this solution are used in the titration then ($x \times 10$) represents the number of parts of HCN by volume per 100,000 parts of the atmosphere within the barge, at normal tempera ture and pressure.

III. Blank Experiments : Chemical Difficulties.

I. Small-Scale Experiments.

In the first place blank experiments were carried out to test the gastightness of the apparatus. The following results are an example of the degree of satisfaction which the apparatus normally gave in this respect, using a charge of 0·10 gram sodium cyanide :—

Table II.

Date	Time	Volume displaced	Tempera-ture °F.	HCN-concentration	
				Parts per 100,000 by volume	Percentage of theoretical value
1925—		c.c.			
April 16	2-30 p.m.	250	87	282	66
„ 16	4-0 „	250	87	282	66
„ 17	9-15 a.m.	250	85·5	180	42
„ 17	2-15 p.m.	250	87	246	56
„ 17	4-0 „	250	87	252	59
„ 18	12-0 noon	250	86·5	246	56
„ 20	11-0 a.m.	250	87	246	56
„ 20	11-35 „	250	87	246	56

It will be observed that the above test lasted for 4 days without opening up. The low result obtained at 9-15 a.m. on April, 17th may have been partly due to the effect discussed on pages 76—79, or it may have been due either to direct condensation of HCN or to condensation of moisture having occurred during the night with consequent solution of some of the HCN, which may not all have been regasi-

fied at the time of this determination (see page 95). With a smaller charge of 0·05 gram, the following results are fairly typical :—

TABLE III.

Date	Time	Volume displaced	Tempera-ture °F.	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value
1925—		c.c.			
February 19 . .	8-35 a.m.	500	71	183	86
„ 19 . .	12-15 p.m.	500	76·5	192	90
„ 19 . .	4-15 „	500	77·5	190	89
„ 19 . .	8-25 „	500	75·5	175	82

Over a period of 12 hours the changes in concentration have been comparatively small. In one or two cases, however, such a degree of consistency was not obtained in the results for the HCN-concentration ; the following is the most extreme example of the variation observed, when the charge of sodium cyanide used was 0·10 gram :—

TABLE IV.

Date	Time	Volume displaced	Tempera-ture °F.	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value
1925—		c.c.			
April 21	11-30 a.m.	250	89	240	56
„ 22	7-30 „	250	87	204	48
„ 22	11-30 „	250	88	162	38
„ 22	12- 5 p.m.	250	88	216	51
„ 22	2- 0 „	250	88	138	32
„ 22	3-10 „	250	88	210	49

These variations cannot be ascribed to leaks because some of the later determinations gave comparatively high values. With such a constant temperature it is difficult to believe that differences in concentration occurred within the desiccator or that the anomalies were due to condensation of HCN or to absorption and subsequent evolution of the HCN either in the liquid paraffin or in water of condensation. It may be added that the determination at 12-5 p.m. on April 22nd, 1925, was made because the previous determination made only half an hour before had given a result which was unexpectedly low. Such variations as this, however, were most unusual.

(i) *Effect of Moisture on the Cyanide-Acid Reaction.* When these experiments were first planned it appeared likely that moisture present in the desiccator atmos-

phere might give rise to difficulties in the event of any temperature changes. Thus if an experiment were started when the day temperature was 86° F. and the relative humidity 60 per cent. and if the night temperature were to fall to 70°F. the air would be saturated; with a higher day humidity or a lower night temperature, deposition of dew would occur accompanied by solution of HCN therein, with some disturbance in the concentration of HCN in the atmosphere within the desiccator. With a suitable rise in temperature the next morning the condensed water would evaporate, leaving no clue to the fact that the HCN-concentration had actually been lower during the night. It was evident that this difficulty might be accentuated if aqueous solutions were used to generate the HCN. If only two drops of water (0·075 gram) were added to the charge of cyanide, and if all this water were to be vaporised in the cyanide-acid reaction, it would entail the consequence that with the above day conditions the air would be saturated if the temperature fell to 74°F. only. Thus the effect of even a small amount of added water might apparently be considerable. It was therefore decided not to add any water to the charges of cyanide or acid but to use air-dry cyanide and ordinary concentrated sulphuric acid. In view of the considerations detailed below, however, this decision was modified at a later date, the risk of condensation of moisture being preferred to the other difficulties actually encountered. Moreover, experience showed that the temperature-range in the Laboratory, day and night, was so small that the difficulty which was feared at first was unlikely to eventuate.

It may be observed that the concentration obtained using 0·10 gram sodium cyanide was considerably less than twice that obtained using 0·05 gram sodium cyanide. Even in the latter case the concentration obtained was less than the theoretical, assuming that the sodium cyanide was pure, that all the HCN radical was converted into HCN, and that all the HCN was evolved. Thus, in the experiments above quoted, with a charge of 0·10 gram sodium cyanide (Table II) the actual initial concentration was 56 per cent. of the theoretical value, while with 0·05 gram sodium cyanide (Table III) it was 86 per cent. of the theoretical value. It was in fact found that a certain quantity of HCN remained in the solution in the crucible, and allowing for the presence of a certain amount of impurity in the cyanide, the higher figure of 86 per cent. of the theoretical value might be regarded as satisfactory. It was not obtained invariably, however, even when charges of only 0·05 gram sodium cyanide were employed. Thus, while in the case already cited the initial HCN-concentration observed was 86 per cent. of the theoretical value, in other experiments with a charge of 0·05 gram sodium cyanide the maximum percentages of the theoretical value obtained were only 77, 66 and 61 respectively; on the other hand, in some experiments in which a charge of 0·10 gram sodium cyanide was used the percentages were 83, 54, 44, and 37 respectively, although the HCN-concentration remained fairly constant throughout each experiment at the value given.

In view of the general superiority of the figure with the smaller charge of sodium cyanide, it was thought that these differences might be caused by differences in the temperature attained in the reaction; the temperature attained would tend to be higher with the larger charge, as dissipation of heat would tend to be slower in this case, and at the higher temperature some side reaction or secondary reaction leading to decomposition of the HCN produced might conceivably occur; thus, according to Thorpe's Dictionary of Applied Chemistry[1] when concentrated sulphuric acid is caused to react with (dry) cyanide, carbon monoxide and ammonia are produced. A possible alternative explanation is that the action of concentrated sulphuric acid on the dry cyanide is so violent that an indefinite amount of the latter is scattered without taking any part in the reaction.

Moreover, it appeared that the varying results with a given charge of cyanide might be due to sodium cyanide being a hygroscopic substance, different quantities of moisture having been absorbed by the cyanide in different experiments; such differences in the amount of absorbed moisture are almost certain to have occurred in the earlier experiments for which air-dry cyanide was frequently weighed out some time before it was used. The violence of the cyanide-acid reaction and the temperature attained would probably be affected by the amount of moisture present. Some experiments were therefore carried out at a later date in which a few drops of water were added to the charges of dried cyanide, and also to the sulphuric acid used to generate the HCN. Whether the explanation be that the water keeps down the temperature or the violence of the reaction, the result was that large increases were in fact produced in the HCN-concentration attained, as is shown by the following examples. In the first series, Table V, potassium cyanide was used; the amount of water added to the cyanide was two drops (0·075 gram) per 0·10 gram potassium cyanide.

TABLE V.

Date	Charge of potassium cyanide 0·10 gram	Volume displaced	Temperature °F.	HCN concentration	
				Parts per 100,000 by volume	Percentage of theoretical value
1925—		c.c.			
August 20	Without water	1,500	83	141	45
„ 20	Do.	1,500	84	137	44
1925—		c.c.			
August 20	With water .	1,500	84	219	70
„ 20	Do. .	1,500	83	224	71

In the second series, Table VI, sodium cyanide was used, sometimes dry (dried by long exposure over fused calcium chloride), and sometimes moistened with water.

[1] Thorpe's Dictionary of Applied Chemistry, vol. II, 1921, 467.

TABLE VI.

Expt No.	Date	Charge of sodium cyanide	Amount of conc sulphuric acid added	Mean temperature °F.	Initial HCN-concentration: Parts per 100,000 by volume	Initial HCN-concentration: Percentage of theoretical value	Final HCN-concentration: Parts per 100,000 by volume	Final HCN-concentration: Percentage of theoretical value	Period between initial and final determinations of HCN-concentration Hours	Amount of sodium cyanide left undecomposed in crucible (%)
	1926—									
1	Feb. 26	0·10 gram and 1 drop water	0·6 c. c. and 3 drops water	82	303	71	270	63	19	--
2	Mar. 2	ditto (Duplicate)	ditto (Duplicate)	82	315	74	303	71	1½	1·0
3	Feb. 24	0·10 gram and 2 drops water.	0·6 c. c. and 3 drops water.	83	309	72	285	67	19	--
4	Mar. 3	ditto (Duplicate)	ditto (Duplicate)	84	324	76	309	72	1½	1·0
5	Feb. 25	0·10 gram and 3 drops water.	0·6 c.c. and 3 drops water.	84	312	73	297	69	22	--
6	Feb. 26	0·10 gram (dried)	0·6 c.c (no water)	82	180	42	156	36	22	8·0
7	Mar. 4	ditto (Duplicate)	ditto (Duplicate)	82	112	26	102	24	2	6·1
8	Mar. 4	ditto (Triplicate)	ditto (Triplicate)	82	162	38	153	36	2	5·7

It is evident from these results that the presence of a small quantity of water causes a much higher HCN-concentration to be attained. Another striking feature is the comparative constancy in the figure obtained for the initial HCN-concentration when diluted acid is used to generate the HCN and some water has been added to the charge of cyanide. It is immaterial whether the water added to the cyanide charge of 0·10 gram be one drop, two drops or three drops. The average of the initial values obtained under these conditions is 312 parts HCN per 100,000; this corresponds to a charge of cyanide equal to 73 per cent. of the theoretical value. This is practically the same as was obtained with the moistened potassium cyanide (Table V) and in many other experiments.

The triplicate tests with specially dried cyanide and pure concentrated sulphuric acid exhibit considerable inconstancy in the amount of HCN generated; the highest value for HCN-concentration, 180 (experiment 6), is about 60 per cent. higher than the lowest, 112 (experiment 7). The average of the three values in the triplicate experiments 6, 7, 8 above, is 151, which represents only 35 per cent. of the theoretical value for the HCN-concentration from the given charge of sodium cyanide. This very low value—which is much lower than that generally obtained in experiments where no water was deliberately added to the charge of cyanide—is probably to be ascribed to the special care taken in drying the cyanide: the "air-dry" material used in the earlier experiments would no doubt have contained hygroscopic moisture.

One other point may be mentioned in connection with Table VI, *viz.*, that a greater percentage of the cyanide remains undecomposed when quite dry cyanide is used in the reaction—the average values being 6·6 per cent. undecomposed with dry cyanide and 1·0 per cent. undecomposed with moistened cyanide and diluted acid. This difference is a further indication of the greater violence of the action with dry cyanide.

(ii) *Absorption of HCN by concentrated Sulphuric Acid.* One other difficulty may be mentioned. In the earlier experiments it was sought to maintain a dry atmosphere inside the desiccator by placing therein concentrated sulphuric acid contained in small glass dishes. But under these conditions it was found that the HCN-concentration gradually fell off with time. Thus, the following example is fairly typical:—

TABLE VII.

Date	Time	Charge sodium cyanide added (gram)	HCN-concentration	
			Parts per 100,000 by volume	Percentage of theoretical value
1925—				
February 12	4-15 p.m.	0·05	111	52
„ 12	7-45 „	..	75	35
„ 12	8-15 „	0·05	156	37
„ 13	7-45 a.m.	..	85	20

This table shows that after 15½ hours from the beginning of the experiment the HCN-concentration obtained from a total charge of 0·10 gram sodium cyanide had fallen to 85 parts HCN per 100,000, representing only 20 per cent. of the theoretical value. Examination of the apparatus revealed no obvious source of leakage. It finally seemed possible that the liquid paraffin had become contaminated with water and so rendered absorbent of HCN, but no trace of moisture could be detected therein. However, a desiccator experiment was tried in which concentrated sulphuric acid was used as the displacing liquid instead of liquid paraffin, as it was thought that there would then be no question of any absorption by the displacing liquid. The experiment yielded the following result :—

TABLE VIII.

Date	Time	Charge sodium cyanide (gram)	HCN-CONCENTRATION	
			Parts per 100,000 by volume	Percentage of theoretical value
1925—				
February 17 . .	11-25 a.m.	0·10	201	47
„ . .	12-25 p.m.	..	75	17
„ . .	1-25 „	..	36	8

This table shows that, instead of remaining constant, the concentration actually fell to 8 per cent. of the theoretical value in less than 2 hours, and the unexpected conclusion was therefore arrived at that *even concentrated sulphuric acid absorbs HCN*. In subsequent experiments, therefore, the dishes of the sulphuric acid were omitted, and no further trouble of this kind was experienced.

2. One-bale scale experiments.

(a) *Wooden Chamber Experiments.*

It was not found possible to maintain a constant concentration of HCN in any of the experiments in the wooden chamber when the exposure was of comparatively

long duration. The following series of results is a fairly typical example of those obtained, the charge being 7 grams sodium cyanide dissolved in 15 c.c. water, acted on by 20 c.c. of 50 per cent. sulphuric acid.

TABLE IX.

Date	Time	HCN-CONCENTRATION	
		Parts per 100,000 by volume	Percentage of theoretical value
924—			
April 10	1-15 p.m.	(Experiment started)	
	1-30 „	147	64
	2-0 „	133	58
	2-30 „	119	52
	3-0 „	125	54
	3-30 „	125	54
	4-0 „	125	54
April 11	11-45 a.m.	55	23
	1-0 p.m.	51	22

Thus in 24 hours the HCN concentration fell to one-third of its initial value, showing that considerable leakage had occurred It may be observed that in spite of this leakage, the HCN-concentration registered a quarter of an hour after the generation of the HCN was 64 per cent. of the theoretical—a figure agreeing with the general experience when water was present during the cyanide-acid reaction (pages 94—98).

(*b*) *Steel Chamber Experiments.*

The blank experiments in the steel chamber are summarized in the following table :—

TABLE X.

Blank Experiments in Steel Chamber.

Expt. No.	Date	Time	Duration of exposure (hours)	Charges: Sodium cyanide	Charges: Sulphuric acid	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value
	1925—						
1	June 6	9-20 a.m.	(started)				
		9-50 ,,	½	20 grams in 20 c.c. water.	20 c.c. with 20 c.c. water.	296	64
		5-15 p.m	8	..	..	274	59
	June 8	9-5 a.m.	48	..	..	184	40
2	June 15	11-45 a.m.	(started)				
		12-30 p.m.	¾	2 oz. in 2 oz. water.	2 oz. in 2 oz. water.	560	40
		2-15 ,,	2½	..	..	611	44
		4-15 ,,	4½	..	..	603	43
	June 16	9-45 a.m.	22	..	..	520	37
	,, 17	9-30 ,,	46	..	..	404	29

The first blank experiment in which the loss during 48 hours was only 38 per cent. of the initial concentration, was confirmed by the second blank experiment in which large charges were used, and in which the loss after 46 hours was in about the same proportion as in the first experiment. This showed that the steel chamber was sufficiently gas-tight for this work.

IV. Experiments with the Grain-weevil (*Sitophilus oryzae.*)

It has already been mentioned that the object of these experiments was to determine the lethal power of HCN for the grain-weevil, and its dependence upon concentration and duration of exposure. It was only at a later stage that it was found to depend also upon the temperature; this effect is no doubt a consequence of the reduced vitality of the weevils at higher temperatures, a feature to which Dr. Hunter had indeed already drawn attention as regards the boll-weevil.

1. Small-Scale Experiments.

The experiments fall into two series. Series I happened to be carried out during the "cold wave" prevalent in Bombay in February 1925, while Series II was carried out during the hot weather of the following May.

A summary of the results is given in the tables below. In Series II it was intended at first to study more closely the results obtained with about 18 hours' exposure, in view of the results obtained with this exposure in Series I, when only one weevil out of 20 had not been killed outright.

Table XI.

The Effect on Grain Weevils of Exposure to HCN—Series I.

Experiment No.	Date	Period of exposure (hours)	Charge sodium cyanide (gram)	Mean temperature °F	Average HCN-concentration		No of weevils present	Effect of Exposure on Weevils		
					Parts per 100,000 by volume	Percentage of theoretical value		Did not revive	Revived but died within 48 hours	Revived and lived more than 48 hours
	1925--									
1	Feb. 2	4	0·05	76	114	54	10	0	0	20
2	„ 3	8	0·05	77	141	66	10	2	5	3
3	„ 4	12	0·05	77	101	47	10	8	2	0
4	„ 9	12	0·05	75	185	86	10	10	0	0
5	„ 5	16	0·05	73	86	40	10	4	6	0
6	„ 6	16	0·10	73	101	24	20	14	6	0
7	„ 12	16	0·10	72	107	25	20	17	3	0
8	„ 18	16	0·05	71	173	81	10	7	3	0
9	„ 19	18	0·05	76	152	71	20	19	1	0
10	„ 17	20	0·10	76	322	75	10	10	0	0

Table XII.

The Effect on Grain Weevils of Exposure to HCN—Series II.

Experiment No.	Date	Period of exposure (hours)	Charge sodium cyanide (gram)	Mean temperature °F	Average HCN-concentration		No. of weevils present	Effect of exposure on weevils		
					Parts per 100,000 by volume	Percentage of theoretical value		Did not revive	Revived but died within 48 hours	Revived and lived more than 48 hours
11	1925— May 29	9	0·05	86	125	59	20	4	16	0
12	„ 30	9	0·05	85	135	63	18	12	6	0
13	„ 26	12	0·10	88	220	51	20	20	0	0
14	„ 26	12	0·05	88	139	65	20	20	0	0
15	„ 28	12	0·05	86	144	68	20	18	2	0
16	June 1	16	0·05	84	111	52	20	19	0	1
17	„ 2	16	0·05	82	133	62	20	19	1	0
18	May 20	19	0·10	88	141	33	20	20	0	0
19	„ 21	19	0·10	87	174	41	20	20	0	0
20	June	19	0·05	82	113	48	20	15	2	3
21	„ 5	19	0·05	81	126	59	20	18	1	1
22	May 22	22	0·10	86	140	33	20	20	0	0
23	June 8	24	0·05	84	100	47	20	20	0	0
24	„ 9	24	0·05	84	104	49	20	20	0	0

The first two experiments (Nos. 18, 19) performed in Series II, however, resulted in all weevils being killed outright after 19 hours' exposure. A similar result was obtained in the next exposure, which was for 22 hours (No. 22), and for the two following exposures (Nos. 13, 14) which were for 12 hours. A third exposure for 12 hours did not give the same result, as two weevils out of the 20 did show signs of life some time subsequent to their removal from the desiccator, but they died soon afterwards. Two experiments were then made with only 9 hours' exposure each: with this exposure a fairly large percentage of the weevils recovered, but died soon afterwards. It was at once apparent that the results in Series II were very different from those in Series I. Thus, taking into consideration all results for 12 hours' exposure or more in Series I, 21 weevils out of 110 revived but in Series II only 6 revived out of 240. The most striking general difference between Series I and Series II is that the first set of experiments was

carried out in the cold weather and the second set in the hot weather; it therefore appears to be the case that the higher temperatures prevalent during Series II are responsible for the greater ease of killing in that Series. This is not an unexpected result when it is borne in mind that the grain weevils were much more lethargic and had a reduced vitality in the hot weather, causing them to die in larger numbers than during the cold weather,—thus confirming the observations on the boll weevil itself referred to by Dr. Hunter. That the temperature played an important part appears also from a closer examination of the results obtained in the hot weather, Series II. Thus, in the 12 hours' exposure, excluding No. 13 where the HCN-concentration was comparatively high, and comparing only Nos. 14 and 15 (HCN-concentrations 139 and 144 parts respectively per 100,000), it is noteworthy that at 88°F. all 20 weevils were killed outright, while at 86°F. two weevils out of the 20 weevils revived in not more than 16 hours, but died some hours afterwards. As an isolated instance this might be regarded as a mere chance, two of the weevils having rather more vitality than any of the others. But the case is strengthened when a similar instance occurs in the 16 hours' exposure, No. 17, where at a similar HCN-concentration one weevil revived out of 20 (but died soon afterwards) the temperature being lower at 82°-83°F. The results for the 19 hours' exposures yield further confirmation, for in No. 18 the HCN-concentration was the same as in the other experiments quoted and none of the weevils revived, the temperature being 87°F., but in No. 20 at 82°F. and No. 21 at 81°F., some of the weevils revived in each case, although here the result might be attributed to the average HCN-concentration being rather low, (113 and 126 parts HCN respectively per 100,000).

Although it is most satisfactory no doubt to ensure that all the weevils are killed outright and do not revive however favourable may be the circumstances, it may be pointed out that it is most probable that no danger is to be apprehended from weevils which have been gassed for about *12 hours* at a concentration of 150 parts HCN per 100,000. The weevils, two or three minutes after being gassed, display no movement (this may of course be "shamming" in the first instance), but on being removed after the 12 hours' exposure and placed in fresh air, they seldom revive until some hours have elapsed. But when they do revive they are evidently most uncomfortable, periodically lying on their backs and kicking their legs—walking unsteadily an inch or so and again turning on their backs, etc., and displaying no interest in food which is made available for them; and almost invariably they die some hours later without ever having partaken of any of the food.

In taking precautions against the weevil, however, it is necessary to provide against the possibility of those conditions prevailing which are most favourable to the weevils. Bearing all the above facts in mind, the conclusion is reached, so far as the grain weevil (*Sitophilus oryzae*) is concerned, that an exposure for 20 hours under Bombay conditions to a concentration of 150 parts HCN per 100,000 (by volume) will be sufficient to ensure its destruction.

2. Intermediate-Scale (Wooden Chamber) Experiments.

The various results obtained in the wooden chamber tests on *Sitophilus oryzae* are summarized in the table below :—

Table XIII.

Experiment No.	Date	Time		Duration of exposure (hours)	Concentration parts HCN per 100,000		Effect on Weevils	
		Start	Finish		Start	Finish	Alive	Dead
	1924—							
1	Mar. 26 .	11-15 a.m.	2-15 p.m.	3	156	134	20	0
2	„ 27 .	12-15 p m	3-30 „	3	296	260	200	0
3	„ 31 .	11-30 a.m.	2-30 „	3	318	308	20	0
4	„ 28 .	11-35 „	2-30 „	3	360	314	200	0
5	Apl. 1 .	11-45 „	2-45 „	3	400	580	12	8
6	„ 2 .	10-50 „	4-50 „	6	324	210	40	0
7	Mar. 26 .	4-0 p.m.	..	..	160		.	..
	„ 27 .	..	11-20 a.m.	19	.	90	0	20
8	Apl. 11 .	3-0 p m.	..	..	161	..	.	
	„ 12 .	..	11-45 a.m.	21	..	78	0	80
9	„ 10 .	1-15 p m.	..	..	147	..		.
	„ 11 .	..	1-15 p.m.	24	..	51	0	80
10	„ 2 .	5-5 p.m.	..	..	160	..	.	.
	„ 3 .	..	5-5 p.m.	24	..	78	0	10

It will be noted that these experiments were carried out previous to those in the fumigation desiccator. From them it appeared that short exposures at comparatively high concentrations of HCN would not be as satisfactory as longer exposures at lower concentrations. All the 3-hours' exposures were quite unsatisfactory ; even with a concentration of about 500 parts per 100,000 (Expt. 5) no fewer than 12 out of 20 weevils remained alive after this period of exposure. Again, the 6-hours' exposure at an average concentration of over 280 parts per 100,000 was also ineffective. On the other hand, all the longer exposures—19 hours and upwards—proved effective with an initial concentration of about 160 parts per 100,000 and an average concentration of about 115 parts per 100,000. These figures agree fairly

well with those already referred to in Series II, page 103, dealing with the determination of lethal concentration of HCN for the grain weevil under hot-weather conditions.

Conclusion. The results of this division may therefore be summed up in the conclusion that to ensure the extermination of grain-weevils under Bombay conditions, it is sufficient to expose them for a period of 20 hours to a HCN-concentration of 150 parts per 100,000 by volume.

V. Experiments with the Mexican Boll-weevil (*Anthonomus grandis*).

These experiments were carried out in the Delta Laboratory, Tallulah, La., U. S. A., where numbers of boll-weevils were available for the purpose.

The actual results obtained by Mr. G. L. Smith in October-November, 1924. and by Messrs. F. H. Tucker and V. V. Williams in November, 1925, are reproduced in Appendix III. It will be observed that the experiments were of two types—box experiments and desiccator experiments. The former were designed to reproduce the conditions of the wooden chamber experiments (page 84), while the latter were carried out in the same way as the desiccator experiments on the grain-weevil (pages 75—84).

It is interesting to note that the boll-weevil displays in these experiments a susceptibility to the effects of temperature similar to that displayed by the grain-weevil. Thus, in Table I, Appendix III, experiments 22 and 23 were of the same duration (2 hours) at the same initial HCN-concentration (375 parts per 100,000), but whereas in the former the maximum temperature was 73°F. and 8 out of 25 weevils were not killed, in the latter the maximum temperature was only 63°F. and not one weevil was killed out of 25.

Another point of great interest and importance is that hibernated weevils are shown to be much more susceptible to HCN than field weevils. For example, from Table II, Appendix III, it is seen that the hibernated weevils were all killed in every single experiment—even with the lowest HCN-concentration (192 parts per 100,000) after only 5 hours' exposure at a temperature of about 63°F. (experiment nos. 27 and 30); whereas in experiment no. 26 at the same temperature but at a higher HCN-concentration (230 parts per 100,000), the same exposure resulted in the deaths of only 60 per cent. of the field-collected weevils.

It so happens that practically no danger is to be apprehended from the active weevils as no food would be available for them on the voyage. If, therefore, the fumigation procedure is based on the greater vitality of field (active) weevils and only hibernated weevils have actually to be feared, it is evident that the chances of any such weevils surviving the fumigation are infinitesimal.

In examining in detail the results for the experiments to determine the lethal power of HCN for the boll-weevil, it will be simpler to consider first the results of

the box-experiments, Table 1, Appendix III. The following is the description of the box used: "A box six feet by three feet by three feet internal measurement was constructed of one inch A1 pure lumber and all fittings felted and stripped on the outside, making the box as near air-tight as possible. The joining of the box and border of the door were felted so that when closed the two feltings meshed. The sodium cyanide was placed in a crucible near the centre of the box on the floor and the acid was poured in through a glass stop-cock funnel which was located in the top of the box." From his results (Table I, Appendix III) Mr. Smith concluded "that the concentration of 150 parts HCN gas to 100,000 parts space is too weak to kill the weevils, while twice this strength would be doubtful without further study. However, it appears that three times this concentration (450 parts HCN to 100,000 parts space) could be used with a fair degree of certainty in fumigation 2-hour periods, provided the temperature was not lower than 80°F." Messrs. Tucker and Williams used the same box and as a result of their experiments with this box and with the desiccator came to a similar conclusion: "Judging from a detail study of box tests it is seen that for all practical uses a concentration of 450 parts of HCN to 100,000 parts air by volume over a two-hour period should give 100 per cent. mortality as a fumigant for the boll-weevil in any average fumigation plant."

So far as the box experiments are concerned, however, it has to be remembered that the HCN-concentration assigned in any particular experiment is a calculated value only. The results quoted on page 105 show that the actual HCN-concentration attained is always less, and in certain circumstances may be very much less, than the calculated HCN-concentration. Moreover, in the box experiments described in division II, where actual determinations of HCN-concentration were made, the HCN-concentration fell continuously so that the final HCN-concentration obtained during a 24 hours' exposure was only about one-third the initial concentration. It can therefore be assumed with a fair amount of certainty that the HCN-concentration actually experienced in the box experiments of Table I, Appendix III, will have been decidedly less than the calculated. especially when the exposure extended over a considerable period. In these circumstances it is hardly possible to sustain the conclusion from Table I that the concentration of 150 parts HCN per 100,000 by volume was not sufficient to kill the weevils in 20 hours. In view of the facts that very low temperatures were experienced, that the initial HCN concentration must have been much less than the calculated, that there is a strong probability of considerable leakage during the 20 hours, and lastly, that a fairly high percentage of mortality was experienced in these exposures (roughly about 50 per cent.) —it appears legitimate to draw the conclusion that a concentration of 150 parts (actual) HCN per 100,000 *would* be sufficient under Bombay conditions to kill the weevils in 20 hours. Unfortunately, in the later experiments the concentration was never as low as 150 parts HCN per 100,000, and in no case did the exposure extend over a period of more than 12 hours. Consequently, the later

experiments, Table II, Appendix III, throw no direct light on the value of an exposure to a concentration of 150 parts HCN per 100 000 for a period of 20 hours.

The same objections as to the value of the initial HCN-concentration and the probable leakage cannot of course be taken to the results with high (theoretical) HCN-concentration which *have* been effective in killing the weevils. In these cases, indeed it must be deduced that the effective HCN-concentration must have been considerably less than the nominal. In the later experiments (Nos. 3, 5, 6, Table II, Appendix III) a theoretical HCN-concentration of 450 parts per 100,000 has been sufficient to kill the weevils in 2 hours. In two other experiments (Nos. 18, 20, Table II, Appendix II) a HCN-concentration of 375 parts per 100 000 was sufficient to kill 29 weevils out of 30 in the one case and to kill all 30 weevils used in the second case. It would therefore appear from this experiment, carried out at a temperature of 70°F., that exposure for 2 hours to a HCN-concentration of 375 parts per 100,000 is almost certain to kill the weevils, while the rather higher HCN-concentration of 450 parts per 100,000 is certain to kill the weevils. Thus at high concentrations the boll-weevil appears to be decidedly more susceptible to the HCN than does the grain-weevil (compare page 105).

But as this investigation is directed to determining the *minimum* HCN-concentration necessary, the results obtained in the first series of experiments (Table I, Appendix III) cannot be disregarded, and both series of results must be considered in conjunction with one another. Referring to Table I, Appendix III, therefore, one observes that in experiment nos. 33, 34, 35, a theoretical HCN-concentration of 450 parts per 100 000 was only in one case sufficient to kill all the weevils in 2 hours. In experiment No. 35 one weevil and in experiment No. 33 six weevils remained alive out of 25 weevils exposed for 2 hours in each case. Similarly, when a theoretical HCN-concentration of 375 parts per 100,000 was used, there were numbers of cases in which the weevils were not killed. Yet the temperatures during these experiments were higher than those recorded during the later experiments, so that fai ure to kill the weevils would have been regarded as more likely to occur in the second series. Only two explanations of these results appear to be possible, *viz.*, either the vitality of the weevils in the first series was much greater than in the second series, or the average HCN-concentrations actually attained in the first series were a less proportion of the theoretical than in the second series. It is possible, of course, that both factors were present acting concurrently. But as for safety in working out a practical method of fumigation it is necessary to assume the operation of the most adverse circumstances, the effective theoretical HCN-concentrations in these short-period fum'gations must be taken as the actual concentrations, so that taking all the experiments together it is not possible to act on the conclusion that exposure of the weevils for 2 hours to an atmosphere contain'ng 450 parts HCN per 100,000 will certainly kill all the weevils. From these experiments, the only safe conclusion which is permissible is that at this HCN-concentration an exposure for 4 hours will certainly result in the killing of all the weevils.

The desiccator experiments may now be considered. The weevils used in these experiments were of two kinds, *viz.*, those collected from the field and those which "had gone into Spanish moss to hibernate. The reason for this change was due, of course, to the impossibility of collecting weevils from the cotton fields this year (*i.e.* 1925) later than November 10". As already indicated, perhaps the most remarkable fact about these desiccator experiments is the great disparity between the results obtained for field-collected weevils and for hibernated weevils. The results for field-collected weevils, however, show considerable variation: comparing No. 23 with No. 26, in the former only one weevil out of 30 remained alive after 4 hours' exposure to a HCN-concentration of 211 parts per 100,000, while in the latter 12 weevils out of 30 remained alive after a longer exposure (5 hours) to a rather higher HCN-concentration (230 parts per 100,000), at much the same mean temperature (66°F. in the former, 63°F. in the latter). The chief conclusion to be drawn from such conflicting results is that the vitality of these weevils fluctuates considerably. It is therefore safest to presume that the differences obtained in the first series of box experiments from those obtained in the later series of box experiments are to be attributed to this cause.

Some still later tests on active weevils only, carried out by Messrs. F. H. Tucker and G. L. Smith, are reproduced in Table III, Appendix III. Commenting on these results the authors state: "Of the thirteen tests in which the HCN gas was introduced, only one test failed to give 100 per cent. weevil mortality and this was a one hour exposure in which the gas concentration was 191 to 100,000 by volume. Twenty per cent. of the weevils were alive in this test. In the other tests the gas concentration was 300 or more to 100,000 with one exception. This was test No. 1 in which the gas concentration was 259 to 100,000 but the weevils were exposed to the gas for 5 hours in this test. A total kill resulted at all exposures, whether 1, 3 or 5 hours, when the gas concentration was not lower than 300 to 100,000. It seems that a one hour exposure is sufficient to produce a total mortality of weevils when a concentration of gas not less than 300 to 100,000 is used at moderate temperatures."

The surprising thing about these results is that the active weevils appear to be much more easily killed than in the earlier experiments. Indeed, they now appear to be more susceptible than hibernated weevils, not less. But bearing in mind the desirability of having a fairly large "factor of safety" it still appears best to base the practical procedure on those Experiments in which the boll-weevils display the greatest vitality.

Conclusion. If the practical procedure in fumigation were to be based entirely on these results it would be necessary to stipulate for an exposure for 4 hours to an *actual* HCN-concentration of 450 parts per 100,000. In view also of the results which were obtained with the grain-weevil, however, it is deduced that it would probably be equally effective to expose the boll-weevils continuously for 20 hours to a HCN-concentration which is not allowed to fall below 150 parts per 100,000.

VI. Absorption Experiments with Cotton and Cotton Bales.

1. Small-Scale Experiments.

(a) *General.*

The consideration of the absorption of HCN by cotton presents many difficulties in its theoretical aspects. To begin with, cotton is not a homogeneous solid—and its wax, cuticle, cellulose and protoplasm may react differently towards HCN. Moreover, the cotton contains moisture, the exact disposition of which is also unknown. If cotton were found not to absorb HCN the latter would be merely distributed through the air-spaces of the cotton. In this case one would expect that in desiccator experiments the atmospheric HCN-concentration from a given charge of cyanide would be rather higher with cotton present than with cotton absent, simply because the air-space available is reduced by the volume of the solid cotton substance. But if cotton *were* found to absorb HCN, with so many components present it would require much investigation to isolate the effect of each component, and to decide whether the observed results were due to the formation of one or more solid solutions or chemical compounds or to absorption effects. In the present experiments therefore it was only sought to answer questions having an immediate practical interest, chiefly to ascertain the extent, if any, of the absorption of HCN by the cotton and also the extent to which the gas is given off after the cotton is removed from the atmosphere containing the HCN. To this end the following series of experiments were carried out :—

(1) Blank experiments ;
(2) Experiments with loose and baled cotton ;
(3) Experiments with cotton with different moisture contents ;
(4) Experiments with cotton at different temperatures ;
(5) Aspiration experiments.

(i) *Air-space present in a cotton bale.* Bales of American cotton for export are heavily pressed, having a density of 23 lb. or more per cubic foot. As the mean specific gravity of the solid substance composing the cotton fibre is about 1·5, it follows that for cotton bales of the density mentioned, only about one-quarter of the volume is occupied by cotton, the remaining three-quarters being occupied by air ; some of this air lies between the individual fibres, some fills the central canal of the fibres and some fills the spaces in the fibrillar net-work forming the fibre-walls, Reliable figures are not available for the particular distribution of the total air-space, but considering the volume of an individual fibre, we shall probably not be far wrong if we allow a minimum volume of 80 per cent. for the solid substance, leaving say 10 per cent. for the interfibrillar space, and 10 per cent. for the central canal. In a bale of American cotton, therefore, pressed to the density mentioned,—of the 75 per cent of the volume occupied by air, we may take 7·5 per cent. as occupied by interfibrillar air, 7·5 per cent. by air in the central canal, and about 60 per cent. by interfibre air.

(ii) *Absorption Experiments.* To determine the amount of HCN-absorption the previously weighed cotton (120 grams) was placed inside the desiccator, the HCN generated, and the first determination of HCN-concentration made after a quarter of an hour had elapsed, other determinations being made at intervals later.

In order to provide a further check on the accuracy of the results for the absorption of HCN by the cotton, a system of multiple charges was arranged for. Evidently the absorption capacity of the cotton is likely to be limited : when a series of charges is given in succession this limit will tend to be approached and additional charges will not be absorbed to the same extent, so that the HCN-concentration in the desiccator will tend to increase out of proportion to the magnitude of the additional charge given.

Diffusion of HCN into a mass of cotton might be expected to be most rapid when the interfibre air spaces are largest. Equilibrium would then be attained most rapidly when the cotton is in a loose condition. For this reason a number of experiments were made with loose cotton and a number also with cotton made up into small experimental bales having a density of about 10 lb. per cubic foot. With such bales the volume occupied by the solid substance would be only about 10 per cent., the remaining 90 per cent. being air-space. From these experiments it was hoped to gauge the maximum absorption which would have to be provided for. And as the *rate* of absorption would be expected to depend on the extent of the surface exposed in relation to the total volume of cotton, it was thought that some information could be derived in this connection from the tests on the experimental bales : this did not prove possible, however. no doubt because the experimental bales containing 90 per cent. air-space did not in effect differ sufficiently from the loose cotton to make it possible to decide whether any observed difference was due to the state of packing or to an inherent difficulty of determining the actual amount of absorption.

(iii) *Experimental difficulty.* The difficulty to which allusion has just been made arises from the fact that the method of experiment made it impossible to obtain exact knowledge of the HCN-concentration which would have been attained if the cotton had not been present. It was accordingly necessary to assume some figure for this HCN-concentration which would have been attained in the absence of the cotton. But mention has already been made of the fact that the initial HCN-concentration was very largely a matter of circumstances, being affected by the quantity of cyanide used as a charge and by the amount of water present. This initial HCN-concentration difficulty was well-recognized before most of these absorption experiments were carried out. An attempt was therefore made to reduce its magnitude in the first place by making blank experiments both before and after a series of absorption experiments ; the mean values obtained in the blank experiments were then taken as an indication of the values which would have been attained in the other experiments if the cotton had been absent. In addition, every effort was made to see that exactly the same routine was followed in each experiment

That this procedure was at any rate partially successful will be apparent from the much improved concordance of the figures for HCN-concentration obtained in comparable experiments as recorded in Tables XIV, XV and XVI. When, however, it was found at a later date that more consistent results for the quantity of HCN generated could be obtained by adding a little water, these absorption experiments were repeated under the new conditions.

(iv) *Effect of moisture content.* The experiments on cotton having different moisture contents were carried out as follows. Three duplicate sets of samples of American cotton were prepared, each sample weighing 60 grams. One pair of samples was placed in a large desiccator containing distilled water in its lower portion; a second pair of samples was placed in a large desiccator containing concentrated sulphuric acid in its lower portion; while the last pair of samples was placed direct in the fumigation desiccator. The samples were allowed to condition in the respective desiccators for different periods in different experiments. Further, when it was desired to prepare the experimental bales, the pair of samples in question was withdrawn from the desiccator, quickly tied up with cotton spindle banding, and replaced in the same desiccator and conditioned for a further period. When an experiment was to be performed, the duplicate samples were removed from the conditioning desiccator and at once transferred to the fumigation desiccator, the lid of which was immediately replaced and all connections made and sealed. The HCN was then generated and the usual procedure of the fumigation experiments followed: this has already been described.

Owing to the absence of any arrangement for controlling the humidity in the fumigation desiccator, it was not sought to control the actual condition attained by the duplicate sets of samples; instead, at the end of a fumigation experiment, both bales were quickly withdrawn from the desiccator and placed in tins and sealed; on one of them (and sometimes on both) a determination of the moisture content was made by means of the Baer Conditioning Oven; on the other sample a determination was in some cases made of the HCN-content by aspiration experiments, as will be described later.

(v) *Effect of temperature.* From some of the experimental results it appeared as if the temperature was having some effect on the amount of absorption by the cotton. Some further experiments were therefore designed to elucidate this point. For this purpose, the whole of the fumigation desiccator was immersed up to the lid in a bath of water of which the temperature was controlled. The temperature was first kept at 30°C. (approximately room temperature at the time these experiments were made), then raised to 35°C. and finally to 40°C., the temperature being kept constant at each value for two hours; two determinations of HCN-concentration were made at each temperature.

(vi) *Aspiration experiments.* The aspiration experiments, to which reference has already been made, were carried out with a view to checking if possible the conclusions as to HCN-absorption drawn from the differences in the HCN-concentration

observed with cotton absent or present in the fumigation desiccator. For this purpose one of the bales of cotton after fumigation was taken from the sealed tin and placed at once in a small desiccator just big enough to hold the bale ; in some cases the bale was transferred directly from the fumigation desiccator to the aspiration desiccator. Air was then aspirated through the small desiccator and the emergent air passed through Drechsel washing-bottles containing N/5 caustic soda (with potassium iodide solution) to absorb any HCN evolved. By using a double set of aspirators and wash-bottles the process was made continuous, two litres of air being aspirated through each set of Drechsel washing-bottles in turn. The aspiration was continued until the amount of HCN evolved was negligible.

(b) *Preliminary Absorption Experiments.*

The various results obtained will now be considered, beginning with some preliminary experiments on the fumigation and aspiration of two experimental bales.

(i) *Fumigation Experiment.* For this experiment a quantity of loose cotton was dried over concentrated sulphuric acid, made into two small bales weighing 63·5 grams each, and then re-conditioned over concentrated sulphuric acid.

TABLE XIV.

Results of a Preliminary Experiment on the Fumigation of Small Cotton Bales.

Time conditioned before baling	27 hours.
Time conditioned after baling	17 ,,
Moisture content (determined subsequently) . . .	4·6 per cent.
Charge of soduim cyanide	0·10 gram.

Date	Time	Temperature °F.	HCN-concentration	
			Parts per 100,000 by volume	Percentage of theoretical value
1925— February 21 . .	9-0 a.m.	76	70	16
,, 21 . .	10-0 ,,	77	80	19
,, 21 . .	12-0 noon	83·5	120	28
,, 21 . .	2-0 p.m.	83	110	26
,, 21 . .	5-0 ,,	80	80	19
,, 23 . .	9-0 a.m.	77	60	14

The percentages of the theoretical value are much less than any obtained with no cotton present. It appeared clear, therefore, that some absorption by the cotton was taking place. Moreover, these figures reveal a remarkable parallel between the temperature and the concentration of HCN in the desiccator: the higher the temperature the higher the concentration in the desiccator and therefore the less the concentration of HCN in the cotton.

It was this experiment which led to the tentative conclusion that at higher temperatures the absorption by the cotton was less. Further experiments were made with a view to substantiating this result if possible. In point of fact, however, no such confirmation was obtained (compare pages 121, 128).

(ii) *Aspiration results.* In all, a volume of 62 litres of air was drawn through the desiccator containing one of the small experimental bales. From the titration results it was calculated that the equivalent quantity of sodium cyanide required for the HCN recovered from the cotton (allowing for 2 bales) is 0·011 gram. For the final concentration of HCN in the desiccator the equivalent amount of sodium cyanide which would be required is 0·014 gram. Hence the total amount of sodium cyanide which can be accounted for is 0·025 gram. As a charge of 0·10 gram sodium cyanide was actually used in the experiment, 0·075 gram, or 75 per cent., remains unaccounted for. Determinations of the sodium cyanide remaining in the residue in the crucible showed that this amounted to about 6 per cent., leaving still 69 per cent to be accounted for. Some portion of this may have been due to irreversible chemical combination with substances present in the cotton, but alternative explanations are that impurity was present in the sodium cyanide, or that some of the HCN was decomposed in the reaction, or that either the fumigation apparatus or the aspiration apparatus was leaking, or that solution in the displacing liquid was taking place, or that considerable loss of HCN occurred during the transfer of the bale to the aspiration desiccator. Precautions were taken against some of these alternatives, and the most likely cause of the discrepancy appears to be initial decomposition or non-formation of the HCN, as discussed on page 96.

The results in other determinations varied from this figure but in all cases a large proportion was left unaccounted for. The following are some of the figures obtained; these figures include also the sodium cyanide left in the crucible in the desiccator.

TABLE XV.

Date	Sodium cyanide unaccounted for	Moisture content	Volume aspirated (litres)
	%	%	
1925—			
February 22 . . .	65	13·4	152
March 31 . . .	60	12·5	120

In view of the large percentage of sodium cyanide invariably left unaccounted for, these results could not be used to check those obtained by observing the change with time of the concentration of the HCN in the fumigation desiccator; and as they were not of a nature to throw light on the question as to the rapidity with which the cotton gave off HCN, these aspiration experiments were eventually discontinued.

(iii) *Multiple-charge experiments.* We may now proceed to the consideration of the multiple charge experiments. The results are given below in Tables XVI and XVII.

Table XVI.

Multiple-Charge Experiment.

(i) Damp cotton bales.

For this experiment a quantity of loose cotton was kept over water for 52 hours, baled, and re-conditioned over water for 43 hours.

Date	Time of generating HCN	Charge sodium cyanide (gram)	Time of estimation	Temperature °F.	HCN-concentration	
					Parts per 100,000 by volume	Percentage of theoretical value
1925—						
February 23 .	11-35 a.m.	0·10	11-50 a.m.	80	65	15
			12-50 p.m.	81	45	10
„ 23 .	1-7 p.m.	0·10				
			1-22 „	81·5	275	36
			2-10 „	81·5	270	32
„ 24 .	..	..	9-0 a.m.	78	185	22
			2-0 p.m.	84	195	23

Table XVII.

Multiple-Charge Experiment.

(ii) Loose cotton, air-dry.

Date	Time of generating HCN	Charge sodium cyanide (gram)	Time of estimation	Temperature °F.	HCN-concentration	
					Parts per 100,000 by volume	Percentage of theoretical value
1925—						
April 24 .	2-40 p.m.	0·10				
„ 24 .	..	..	3-0 p.m.	87·5	111	26
„ 24 .	..	..	3-20 „	87·5	105	25
„ 25 .	..	..	10-0 a. m.	87	108	25
„ 25 .	..	..	10-25 „	87	111	26
„ 27 .	..	..	9-10 „	86·5	99	23
„ 27 .	..	..	9-30 „	86·5	108	25
„ 27 .	10-35 a.m.	0·10				
„ 27 .	..	..	11-0 „	87	324	38
„ 28 .	..	..	9-20 „	86	267	31

The above experiments indicate that a charge of 0·10 gram sodium cyanide is approximately sufficient to provide for the superficial saturation of the cotton. The addition of a second charge causes an increase in the concentration of HCN in the desiccator of about 220 parts per 100,000. This amount corresponds approximately with the concentration produced by an initial charge of 0·10 gram in the blank experiments made in the course of this investigation. At the same time it is evident that absorption is not complete with the first charge, because the HCN-concentration gradually decreases after the second charge, especially with the damp cotton. However, 24 hours after the additional charge has been given, the HCN-concentration is still about the value normally obtained with a single charge with no cotton present. It is therefore deduced that under these conditions about 0·10 gram of sodium cyanide is required for the fumigation of 120 grams of cotton, or roughly, about 0·1 per cent. of the weight of cotton. (Compare, however, page 128).

It is noteworthy that the loose cotton gave much the same final result as an equal weight of cotton in bale form tested just previously, the results for which are given in Table XVIII below. It will be observed that the bale took more than three hours to reach the equilibrium condition, while the loose cotton had attained it by the time the first estimation was made: this may be partly accounted for by the fact that the baled cotton had already been fumigated on a previous occasion, although it had subsequently been exposed to the air for a long period before the experiment recorded in Table XVIII.

TABLE XVIII.

Cotton in Bale Form—air dry, re-fumigated.

Date	Time of generating HCN	Charge sodium cyanide (gram)	Time of estimation	Temperature °F.	HCN-CONCENTRATION	
					Parts per 100,000 by volume	Percentage of theoretical value
1925—						
April 23 .	10-15 a.m.	0·10				
„ 23 .	..	..	10-45 a.m.	87	147	34
„ 23 .	..	..	11-15 „	87	135	32
„ 23 .	..	..	1-30 p.m.	88	110	26
„ 23 .	..	..	2-0 „	88	102	24
„ 23 .	..	..	3-30 „	87·5	84	20
„ 23 .	..	..	4-0 „	87·5	96	22
„ 24 .	..	..	9-5 a.m.	86	102	24
„ 24 .	..	..	9-50 „	86	111	26

It will be observed that the eight estimations given in this Table (and the first six estimations of the previous Table) really form a series of pairs, the two of a pair having been made immediately after one another. The differences between members of a pair are rather more than were commonly met with in these experiments: the reason for making pairs of determinations was to have mutual checks available. The same procedure was followed generally in subsequent experiments and therefore in the summary tables only the mean values of pairs will be given.

Comparison of the results of Tables XVI and XVII appears to show that there is greater HCN-absorption with the damp cotton than with the air-dry cotton, assuming that in each case the same initial HCN-concentration would have been attained in the absence of the cotton, and that no effect is to be attributed to the damp cotton being baled and the air-dry cotton being in the loose state. Another possible disturbing factor is the difference in temperature, but later experiments indicated that the direct effect of this on absorption was negligible. Still, this temperature difference may have affected the actual amount of HCN generated in the first instance,* and therefore the above evidence that damp cotton is rather more absorptive than air-dry cotton can perhaps hardly be regarded as conclusive. Further results in this connection are discussed on pages 122—28.

(c) *Summary of various Absorption Experiments.* A summary will now be given of various experiments which were made to determine the effects of having the material in baled or loose form, the effect of differences in moisture content of the cotton, the effect of differences in temperature, and the effect of re-fumigation of the cotton. In each of these experiments the charge of sodium cyanide used was 0·10 gram, no water being added: the desiccator throughout was kept immersed in a water-bath of controlled temperature.

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*Later tests on this point showed that any such effect was negligible.

Table XIX.

Effect of various conditions on absorption of HCN by cotton.

Experiment No.	Material	Date	Time	Temperature °F.	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	Remarks.
1	Baled, air-conditioned	April 30 Started 11-5 a.m.	11-30 a.m. 1-30 p.m. 3-30 „	86 95 104	147 159 147	34 37 34	The bales were removed after fumigation, exposed to the air overnight and then used for Experiment 2.
2	Baled, air-conditioned. Same as used in Experiment 1.	May 1 Started 9-45 a.m.	10-30 a.m. 12-30 p.m. 2-30 „	88 95 104	126 126 124	30 30 29	The bales were again removed after fumigation, exposed to the air overnight, and then used for Experiment 3.
3	Baled, air-conditioned. Same as used in Experiments 1 and 2.	May 2 Started 9-55 a.m.	10-30 a.m. 12-30 p.m. 3-30 „	88 95 104	117 120 114	27 28 26	
4	Baled, dry. Dried by heating to 100° for 2 hours, then baled, and then further dried by keeping over conc. sulphuric acid for 90 hours.	May 4 Started 10-20 a.m.	11-0 a.m. 1-45 p.m. 3-45 „	89 95 104	79 70 65	18 16 15	The bales were removed after fumigation, exposed to the air for 5 minutes, replaced in desiccator over conc. sulphuric acid for 17 hours, and then used for Experiment 5.
5	Baled, dry. Same as used in Experiment 4.	May 5 Started 10-0 a.m.	10-30 a.m. 12-45 p.m. 3-45 „	88 95 104	74 78 66	17 18 15	
6	Loose, dry. Dried by heating to 100° C. for 3 hours, and then further dried by keeping over conc. sulphuric acid for 68 hours.	May 8 Started 10-10 a.m.	10-30 a.m. 1-45 p.m. 3-30 „	89 95 104	100 90 90	23 21 21	The cotton was removed after fumigation, exposed to the air for 5 minutes, replaced in desiccator over conc sulphuric acid for 17 hours, and then used for Experiment 7.
7	Loose, dry. Same as used in Experiment 6.	May 9 Started 10-5 a.m.	10-45 a.m. 12-45 p.m. 2-30 „	88 95 104	132 127 127	31 30 30	Moisture content determined after this experiment=3·4 per cent.
8	Baled, damp. Exposed loose to damp atmosphere in water-desiccator for 120 hours before bailing.	May 6 Started 10-45 a.m.	11-0 a.m. 1-45 p.m. 3-45 „	89 95 104	111 102 90	26 24 21	The bales were removed after fumigation and kept in the water desiccator overnight.
9	Baled, damp. Same as used in Experiment 8.	May 7 Started 10-0 a.m.	10-45 a.m. 1-45 p.m. 3-30 „	88 95 104	126 127 117	30 30 27	Moisture content determined after this experiment=11·4 per cent.

TABLE XIX- ntd.

Effect of various conditions on absorption of HCN by cotton—contd.

Experiment No.	Material	Date	Time	Temperature °F.	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	Remarks.
10	Loose, damp. Exposed to damp atmosphere in water-desiccator for 114 hours.	May 11 Started 10 a.m.	10-45 a.m. 1-30 p.m. 3-30 ,,	88 95 104	153 147 132	36 34 31	The cotton was removed after fumigation, kept in the water-desiccator overnight, and then used for Experiment 11.
11	Loose, damp. Same as used in Experiment 10.	May 12 Started 10 a.m.	10-45 a.m. 1-45 p.m. 3-30 ,,	88 95 118	124 112 118	29 26 28	The cotton was removed after fumigation, kept in the water-desiccator for 65 hours, and then used for Experiment 12.
12	Loose, damp. Same as used in Experiments 10, 11.	May 15 Started 10 a.m.	10-45 a.m. 1-15 p.m. 3-45 ,,	89 95 104	159 135 ..	37 32 ..	The cotton was removed after fumigation, kept in the water-desiccator overnight, and then used for Experiment 13.
13	Loose, damp. Same as used in Experiments 10, 11, 12.	May 16 Started 10-5 a.m.	10-45 a.m. 1-15 p.m. 3-15 ,,	89 95 104	132 135 126	31 32 30	Moisture content determined after this experiment =11·9 per cent.
14	Blank	April 16	(mean)	87	282	66	
		,, 17 ,, 18 ,, 20	,, .. (mean)	87 87 87	226 246 243	53 58 57	
15	Do.	April 21 ,, 22	.. (mean)	89 88	240 187	56 44	
16	Do.	May 18	12-0 noon 2-0 p.m. 3-30 ,,	89 95 104	213 216 210	50 51 49	
17	Do.	May 19 ,, 20	12-30 p.m. 3-45 ,, 9-30 a.m. 12-30 p.m.	90 88 87 87	198 199 177 184	46 47 41 43	

All the experiments in the above Table were carried out with the conditions as far as possible the same in each experiment. It will be observed that of the four different blank experiments two were carried out before the other experiments of this series, and two were carried out after. The results vary somewhat from day to day in any given blank experiment. But for comparison with this series, we are chiefly concerned with the concentration values on the first day only, as in this series each experiment was begun and completed on one day ; the different blank experiments show considerable variation for this initial concentration, the highest value being 282 (experiment 14) and the lowest 198 (experiment 17). It is probable that the first value is unusually high, due possibly to the cyanide of the experiment in question having absorbed a greater percentage of hygroscopic moisture (page 96). Hence it is probably best to assume that the average concentration attained without cotton present would be near the mean of all the observations (29 in number) made in the blank experiments. This mean value is 212. At the same time it has to be recognized that the concentration may not have been higher than that corresponding to the minimum value of about 200 attained in experiment 17.

(d) Discussion of the Results of the Absorption Experiments of Table XIX.

(i) *Effect of temperature on absorption by cotton.* We may now proceed to the consideration of the results obtained in this series. It may be at once observed that as regards the temperature effect these results do not bear out those obtained in the preliminary experiment. They afford no evidence of any lesser absorption by the cotton as the temperature increased. It may be observed, however, that the period over which the tests extended was only from 4 to 6 hours. Consequently, it might be argued that equilibrium may not have been reached even by the time that the last estimations were made, and that if the temperature-effect were such that the cotton absorbed more HCN at a lower temperature than under the conditions of these experiments (performed with rising temperatures) the temperature-effect might be masked by the time-effect in the attainment of equilibrium in HCN-absorption by the cotton. As against this, we may note that even at the lower temperature considerable HCN-absorption by the cotton has actually occurred, so it appears legitimate to conclude that the temperature-effect cannot at any rate be a large one. This conclusion is strengthened by the fact that it does not involve any assumptions as to what would have been the concentration attained if no cotton had been present. (Compare pages 114, 128.)

(ii) *Effect of re-fumigation.* The effect of re-fumigation may now be considered. Taking all the results together it must be concluded that any irreversible chemical or physical combination is of negligible amount, otherwise succeeding fumigations would be expected to yield a higher atmospheric concentration of HCN, and this is not the case. On the contrary, the treatment given appears to ensure that the cotton gives off all the HCN absorbed, so that it starts *de novo* in each experi-

ment. The variations which occur therefore in successive fumigations of the same sample are probably due in the main to actual differences in the quantity of HCN evolved from the charge.

(iii) *Effect of baling the cotton.* Comparing the cotton in the baled state with that in the loose state, there is no evidence to show that absorption has taken place faster in the latter condition than in the former. In each case equilibrium seems to have been practically established during the quarter of an hour which elapsed between the generation of the HCN and the making of the first estimation. A surprising feature, however, is that the total absorption seems actually to have been greater with the baled cotton than with the loose cotton. Taking the average of the determinations in the different states, we find that in the dry state the baled cotton gives an average atmospheric HCN-concentration of 72 and the loose cotton 111, while in the damp state the baled cotton gives an average atmospheric HCN-concentration of 112, and the loose cotton 135. This deduction differs from that drawn from the preliminary experiments (page 117). It is conceivable that these differences are due to variability of initial concentration, especially in the case of the damp cottons (comparing experiments 9, 11 and 13); but from an examination of the individual results this would hardly appear to be likely in the case of the dry cottons : this case is discussed in greater detail below.

(iv) *Effect of moisture on the HCN-absorption by cotton.* Turning now to the effect of moisture content we are again somewhat confused by the uncertainty about the quantity of HCN generated. The figures just quoted show that for the baled cotton, the average HCN-concentration is 72 for the dry state and 112 for the damp state, while for the loose cotton the average HCN-concentration is 111 for the dry state and 135 for the damp state. It would therefore appear that the cotton is more absorbent of HCN in the dry state than in the damp state.

The conclusions as to the effects of baling and of moisture on the HCN-absorption by cotton were so unexpected that they were closely examined for any possible sources of disturbing effects beyond that due to the unknown initial HCN-concentration. One such possibility lies in the method used for drying the cotton. It is well known that sulphuric acid has a definite vapour pressure[1,2]; the long periods during which the cotton was exposed to the action of the acid vapours thus rendered it possible for the cotton to take up some of the acid by absorption, absorption, or chemical action. The behaviour of such cotton would in any case probably resemble that of a physical mixture so far as its reaction to HCN was concerned. We have already seen how readily sulphuric acid takes up HCN (page 98), so the apparent greater absorption of dry cotton may result simply from its content of sulphuric acid. Some support is lent to this view by the fact that the baled dry cotton apparently absorbs more HCN than the loose dry cotton, and

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[1] First Report of the Fabrics Co-ordinating Research Committee, 1925, 47.

[2] Guy Barr. Discussion on Hygrometry, Physical Society, London, 1921, *lxxvi.*

it is also the baled dry cotton which has had the longer primary exposure to the vapour of the sulphuric acid— *viz.*, 90 hours as against 68 hours for the loose cotton. On this view it is possible to understand why the results for the air-conditioned bale of experiments 1-3 gave an average value of 131 for the HCN-concentration as against 72 for the dry state and 112 for the damp state. If we now reject the value for the dry state as suspect, we are left with the result that the damp bale is more absorbent than the air-dry, a conclusion which was not unexpected, and which confirms the result already discussed on page 118.

(*e*) *Experiments with Water present in the Cyanide-Acid Reaction.*

The whole question of HCN-absorption by cotton was re-examined at a later date when it was found that the addition of a small amount of water to the charge of cyanide used for generating the HCN made it possible to produce fairly constant initial HCN-concentrations. As before, eight sample bales were made up, each consisting of 60 grams of Texas cotton : four were for use in the dry state and four for use in the wet state. The procedure used in drying the cotton bales was much the same as in the previous experiments, with the important exception that calcium chloride was substituted for sulphuric acid as the drying agent in the desiccator. In view of the possibility of the temperature-effect being complicated by the time-effect of the HCN-absorption by cotton (page 121) other slight modifications were introduced : first, in any one experiment in which the temperature was raised, an estimation of HCN-concentration was made as soon as the bath had been brought to the new and higher temperature ; and secondly, the series of absorption experiments were carried out so that for each experiment in which the temperature was varied a parallel experiment was carried out with the temperature constant. The following Table shows in summary form the experiments carried out and the results obtained therein ; in each experiment the charge was 0·10 gram of sodium cyanide diluted with two drops (0·075 gram) of water.

TABLE XX.

Further Experiments on HCN-Absorption by Cotton, using Watered Cyanide.

Expt. No.	Material.	Date	Time of generating HCN	Time of determination of concentration	Temperature °F	HCN concentration: Parts per 100,000 by volume	HCN concentration: Percentage of theoretical value	REMARKS
18	Baled cotton, dry. Dried by heating to 100° C. for 2 hours and then keeping over calcium chloride till used. (300 hours).	(1926) Mar. 24	9-10 a.m.	9-15 a.m.	80	300	70	Aspiration result = 0·013 gram sodium cyanide per sample bale, *i.e.*, 0·026 gram sodium cyanide for 2 sample bales. Moisture (determined after the experiment = 1·3 per cent.
				9-30 a.m.	80	309	72	
				10-0 a.m.	[illegible]	291	68	
				12-0 noon	95	249	59	
				12-15 p.m.	95	252	59	
				1-40 p.m.	104	252	59	
				3-40 p.m.	104	207	48	
				3-50 p.m.	104	204	48	

TABLE XX—*contd.*

Further Experiments on HCN-Absorption by Cotton using Watered Cyanide—contd.

Expt. No.	Material	Date	Time of generating HCN	Time of determination of concentration	Temperature °F	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	REMARKS
19	Baled cotton, dry Dried by heating to 100° C for 2 hours and then keeping over calcium chloride till used. (300 hours).	Mar. 30 .	10-35 a.m.	10-45 a m. 10-50 a.m 11-55 a m. 12-10 p m. 2-0 p m. 3-0 p m. 3-35 p m. 3-45 p m	95 95 95 95 95 95 95 95	300 291 276 270 258 219 204 207	70 68 65 63 60 51 48 48	Aspiration result = 0·008 gram sodium cyanide per sample bale, i.e., 0 016 gram sodium cyanide for 2 sample bales. Moisture (determined after the experiment) = 1 4 per cent.
20	Baled cotton, damp Kept in water-desiccator for 600 hours before using.	April 10	9-35 a m.	9-40 a.m. 9-50 a m. 10-25 a m. 12-25 p m. 12-35 p m. 1-20 p.m. 3-15 p m. 3-25 p m.	82 82 95 95 95 106 106 106	306 276 276 234 231 207 180 180	71 65 65 55 54 48 42 43	Aspiration result = 0 005 gram sodium cyanide per sample bale, i e, 0 010 gram sodium cyanide for 2 sample bales. Moisture (determined after the experiment) = 14 1 per cent.
21	Baled cotton, damp Kept in water-desiccator for 380 hours before using.	April 1	11 0 a m.	11-5 a m 11-20 a m. 12-20 p m. 1-35 p m. 2-35 p m. 3-30 p.m. 4-10 p m. 4-20 p.m	95 95 95 95 95 95 95 95	294 258 270 249 189 189 174 171	69 60 63 58 44 44 41 40	Aspiration result = 0 010 gram sodium cyanide per sample bale, i e., 0 020 gram sodium cyanide for 2 sample bales. Moisture (determined after the experiment) = 12 3 per cent.

It was found from experiments 18 to 21 that the rate of absorption was much the same, no matter what the temperature was, and that the rate was faster for damp cotton than for dry. Assuming that the final equilibrium had been practically attained during the 5 hour period of each of these experiments. it appeared that the total absorption also was practically independent of temperature, especially in the case of dry cotton. It was, however, sought definitely to prove this in a new series of multiple-charge experiments (22-27) using watered cyanide charges. (From a practical point of view, it is only necessary to ensure that the HCN-concentration is sufficient to exterminate the weevils. So long as this HCN-concentration is maintained it does not matter whether the final equilibrium between the HCN and the cotton has been attained or not: from a knowledge of the final equilibrium-absorption by cotton, however, it should be possible to assign a higher limit to the quantity of chemicals required for the fumigation.)

The new experiments were carried out as follows. Five crucibles were placed in the desiccator each containing a charge of 0·05 gram sodium cyanide which had been kept dry in a desiccator; a number of charges were given in quick succession (at five-minute intervals), that number being given which it was thought would probably suffice to maintain a concentration of at least 150 parts HCN per 100,000 by volume in the desiccator for 24 hours, even with cotton present. Such conditions would then be analogous to those required in practical fumigation. The desiccator was to be kept at a uniform (room) temperature until equilibrium in the HCN-absorption by the cotton had been established; thereafter the temperature was to be raised to 40° C. (104° F.) and the desiccator kept at this temperature for 4 hours, estimations of the concentration then being taken once more. Equilibrium having been established at the lower temperature, it would then be possible to determine whether the equilibrium remained the same at the higher temperature For these experiments, however, new supplies of liquid paraffin had to be used, and it was quickly discovered that the new liquid paraffin was more absorbent than that previously used; other liquid paraffin was obtained but this too proved to be slightly absorbent of HCN. As a consequence, the procedure was slightly modified. Experiments were first carried out as already described, but in addition blank experiments were also carried out in exactly similar fashion. Further experiments were also carried out in which the temperature was raised to 40° C. (104° F.) in a number of stages. Experiments were made with dry and damp cottons respectively. These experiments taken in conjunction with the blank experiments made it possible to gauge the actual amount of HCN-absorption by the cotton. The results are given below in Tables XXI and XXII.

TABLE XXI.

The HCN-Absorption of Dried Cotton.

Expt. No.	Material	Date	Time of generating HCN	Time of determination of Concentration	Temperature °F	HCN-concentration. Parts per 100,000	HCN-concentration. Percentage of theoretical value	Remarks
22	Blank . . .	1927 Jan. 16	3-30 p.m.	3-45 p.m.	77	150	70	Charge of cyanide = 0·05 gram with one drop of water.
				3-55 p.m.	77	150	70	
				8-0 p.m.	75	138	64	
				8-10 p.m.	75	144	67	
		Jan. 17 .	..	9-0 a.m	72	126	59	
				9-25 a.m.	72	126	59	
				10-30 a.m.	104	144	67	
				10-40 a.m.	104	144	67	
23	Baled cotton, dried. Kept in calcium chloride desiccator till used, (408 hours).	Jan. 13 .	3-50 p.m.	4-10 p.m.	78	228	53	Charges of cyanide = 2 × 0·05 gm. = 0·10 gram, with 2 drops of water. Moisture (determined after the experiment) = 4·1 per cent.
				5-0 p.m.	78	228	53	
				8-0 p.m.	77	210	49	
				8 15 p.m.	77	210	49	
		Jan. 14	..	9-0 a.m.	74	150	35	
				9-20 a.m.	74	150	35	
				2-0 p.m.	104	162	38	
				2-15 p.m.	104	168	39	

TABLE XXI—*contd.*

The HCN-Absorption of Dried Cotton—contd.

Expt. No.	Material.	Date.	Time of generating HCN	Time of determination of Concentration.	Temperature °F	HCN-CONCENTRATION. Parts per 100,000	Percentage of theoretical value	REMARKS
24	Baled cotton, dried. Kept over calcium chloride till used. (72 hours).	Jan. 19 .	11-30 a.m.	11-45 a.m.	77	222	52	Charges of cyanide = 2 × 0·05 gm. = 0·10 gram with 2 drops of water. Moisture (determined after the experiment) = 2·9 per cent.
				4-0 p.m.	76	204	48	
				7-0 p.m.	76	168	39	
		Jan. 20 .	..	7-0 a.m.	76	138	32	
				7-50 a.m.	104	174	41	
				9-0 a.m.	104	162	38	
				10-0 a.m.	104	162	38	
				10-15 a.m.	104	159	37	
25	Blank . . .	Jan. 18 .	11-10 a.m	11-25 a.m.	77	258	75	Charges of cyanide = 2 × 0 04 gm. = 0 08 gram with 2 drops of water.
				1-0 p.m.	76	246	72	
				4-0 p.m.	75	246	72	
				6-0 p.m.	76	234	68	
		Jan. 19 .	..	7-0 a.m.	75	198	58	
				9-0 a.m.	74	195	57	
				9-35 a.m.	104	264	77	
				10-35 a.m.	104	234	68	

TABLE XXII.

The HCN-Absorption of Damp Cotton.

Expt. No.	Material	Date	Time of generating HCN	Time of determination of Concentration	Temperature °F	HCN-CONCENTRATION. Parts per 100,000	Percentage of theoretical value	REMARKS
26	Baled cotton, damp. Kept in water-desiccator till used. (384 hours)	(1927) Jan. 12 .	10-5 a.m.	10-30 a.m.	76	246	38	Charges of cyanide = 3 × 0 05 gm. = 0·15 gram with 3 drops of water. Moisture (determined after the experiment) = 12·0 per cent.
				12-0 noon	73	222	34	
				4-0 p.m.	73	204	32	
				8-0 p.m.	73	210	33	
		Jan. 13 .	..	9-0 a.m.	73	204	32	
				9-10 a.m.	73	210	33	
				2-0 p.m.	104	240	37	
				2-20 p.m.	104	240	37	
27	Baled cotton, damp. Kept in water-desiccator till used. (220 hours).	Jan. 20 .	11-30 a.m.	11-45 a.m.	76	318	49	Charges of cyanide = 3 × 0·05 gm. = 0·15 gram with 3 drops of water. Moisture (determined after the experiment) = 11·7 per cent.
				4-0 p.m.	74	258	40	
				7-0 p.m.	74	276	43	
		Jan. 21 .	..	7-5 a.m.	73	228	35	
				8-0 a.m.	77	246	38	
				9-0 a.m.	86	270	41	
				10-0 a.m.	95	282	44	
				11-0 a.m.	104	270	41	

TABLE XXII—*contd.*

The HCN-Absorption of Damp Cotton—contd.

Expt. No.	Material.	Date.	Time of generating HCN	Time of determination of Concentration.	Temperature °F	HCN-CONCENTRATION		REMARKS
						Parts per 100,000	Percentage of theoretical value	
28	Blank	Jan. 21 .	12-5 a m.	12-20 p.m.	75	264	77	Charges of cyanide = 2×0 04 gm. = 0 08 gram with 2 drops of water.
				4-0 p m.	74	249	73	
				7-0 p.m.	74	240	70	
		Jan. 22 .	..	7-0 a m.	73	210	61	
				8-0 a.m.	77	216	63	
				9-0 a m	86	243	71	
				10-0 a m.	95	240	70	
				11-0 a m.	104	240	70	

It will be observed that different charges were given in the different experiments in order to obtain the result previously mentioned, *viz.*, securing a HCN-concentration next morning of about 150 parts per 100,000. This was fairly successfully achieved, although in some of the experiments the HCN-concentration was rather too high. In view of this inequality of initial charge, the simplest basis of comparison is afforded by the figures showing the percentage attained of the theoretical value. In order to eliminate the effect of absorption of HCN by the liquid paraffin, we may in the first place consider only the HCN-concentrations the next morning. The values for the three blank experiments (Nos. 22, 25, 28) are 59, 58 and 61,—giving an average of 59 per cent. of the theoretical value. For the dried cotton the "next morning HCN-concentration in the desiccator" is $\frac{1}{2}$ (35+32)=33 per cent. of the theoretical value, showing that $\frac{26}{59}$ of the charge of cyanide given (0 10 gram) has been used to yield the HCN absorbed by the cotton : *i.e.*, absorption by the cotton (127 grams) accounts for 0·044 gram of sodium cyanide, so that the total HCN-absorption of dried cotton containing 3 to 4 per cent. of moisture requires about 0·035 per cent. of its own weight of sodium cyanide. For damp cotton the "next morning HCN-concentration in the desiccator" is $\frac{1}{2}$ (33+35) = 34 per cent. of the theoretical value, showing that $\frac{25}{59}$ of the charge of cyanide given (0·15 gram) has been used to yield the HCN-absorbed by the cotton, *i e.*, absorption by the cotton (127 grams) accounts for 0·068 gram of sodium cyanide, so that the total HCN-absorption of cotton containing about 12 per cent. of moisture requires about 0·05 per cent. of its own weight of sodium cyanide. Thus the amount of sodium cyanide required for very damp cotton is about half as much again as for very dry cotton.

To trace the course of the absorption we may similarly calculate the amount of cyanide necessary to account for the absorption by the cotton at various times after the generation of the HCN. In blank experiments 22, 25, 28 the average HCN-concentration 20 minutes after HCN-generation is 74 per cent. of the theoretical, after the same period the atmospheric HCN-concentration for dried cotton is

52 per cent. and for damp cotton 43 per cent., so that for this period $\frac{22}{74}$ per cent. of the charge (0·10 gram) =0·030 gram sodium cyanide is required for dried cotton and $\frac{31}{74}$ per cent. of the charge (0·15 gram)=0·063 gram sodium cyanide is required for damp cotton. Hence after 20 minutes the dried and damp cotton have absorbed HCN to account for 0·024 per cent. and 0·05 per cent. of their own weight of sodium cyanide respectively. Similar calculations for approximately a 4-hour period yield the result that the dried and damp cotton have absorbed HCN to account for 0·024 per cent. and 0·05 per cent of their own weight of sodium cyanide respectively.

These results indicate that absorption of HCN by the cotton has been extremely rapid even when allowance is made for the fact that the fresh liquid paraffin introduced for each determination presents a disturbing factor; in the case of the damp cotton, indeed, the final equilibrium appears to have been reached by the time the first determination of HCN-concentration was made. This conclusion does not agree with that drawn from the results of experiments 18-21, Table XX, wherein it appeared that absorption of HCN by cotton was rather slow. However, it may be observed that the HCN-concentration attained after 5 hours is not very different in experiments 18-21, Table XX, from that attained in experiments 22-27, Tables XXI, XXII; so the explanation of the anomaly may simply be that the bales used in the former were more compact than those used in the latter experiments. If this is so, it would appear that the quantity of chemicals required in practical fumigation might be less for heavily compressed bales.

Influence of Temperature. A comparison of experiments 18, 20, with experiments 19, 21 (Table XX) shows that the influence of the temperature upon the rate of absorption of HCN by cotton is negligible. From the results given in Tables XXI, XXII, it appeared at first sight as if the total absorption by the cotton was decidedly less at a higher temperature. The increased atmospheric HCN-concentrations obtained at the higher temperatures were, however, eventually traced to evolution of HCN by the liquid paraffin with rise of temperature, this effect being clearly shown in the blank experiments. When due allowance is made for this effect it is found that the total absorption of HCN by the cotton is in fact practically independent of the temperature within the experimental range 74°—104° F.

Conclusions. We may now sum up the results of the experiments of Tables XX, XXI and XXII in the following conclusions:—

(1) That damp cotton absorbs HCN rather more rapidly than dry cotton;

(2) That damp cotton absorbs HCN to a greater extent than dry cotton, the absorption being possibly 50 per cent. greater for very damp cotton;

(3) That the sodium cyanide required to compensate for the HCN-absorption by the cotton may amount to 0·05 per cent. of the weight of the cotton;

(4) That the influence of temperature upon the absorption of HCN by cotton is negligible within the range 86°—104° F.

2. Intermediate Scale Experiments.

(a) *Wooden Chamber Experiments.*

When a bale of cotton was first placed in the wooden chamber it strained the door somewhat, owing to the chamber being slightly too short to accommodate it; some of the cotton was therefore removed from the ends of the bale and the gunny covering replaced. The following result was obtained with the shortened bale :—

Table XXIII.

Date	Time	Parts HCN per 100,000
(1924) April 8	2-35 p.m.	(Experiment Started).
	2-50 p.m.	176
	3-5 p.m.	141
	3-20 p.m.	117
	3-35 p.m.	98
	3-50 p.m.	78
	4-5 p.m.	78

Thus after $1\frac{1}{2}$ hours' exposure the concentration fell from 176 to 78 parts per 100,000. It appeared, however, as if this fall was partly due to leakage owing to the door having been strained, and consequently no great reliance could be placed upon it. An attempt was made to render the chamber more satisfactory by extending it and trying various devices for making it gas-tight. These did not prove successful. The difficulties were considerably increased later owing to the monsoon rains falling before all the alterations could be completed, and eventually the wooden chamber was abandoned and a new chamber obtained made from steel plates.

(b) *Steel-Chamber Experiments.*

By the time the steel-chamber was available, the facts about the lethal HCN-concentration for *Sitophilus oryzae* had been ascertained. Moreover, the full-scale experiment (page 132) had been brought to a successful conclusion and the maximum limit had thus been found for the quantities of chemicals required to maintain the desired HCN-concentration. The present experiments were therefore restricted to an attempt to fix within narrower limits the quantity of cyanide required to maintain a comparatively high HCN-concentration in the presence of a bale of cotton. The results of these experiments are summarized in Table XXIV below.

TABLE XXIV.

Experiments with a Bale of Cotton in the Steel Tank.

Expt. No.	Date	Time	Duration of exposure (hours)	Charges: Sodium cyanide	Charges: Sulphuric acid	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	Remarks
1	(1925) June 8 .	2-20 p.m.	Started	4 oz. in 4 oz. water	4 oz. in 4 oz. water	..	..	The tank was opened on June 12th at 12-30 p.m. and the fan run to drive out the air surrounding the bale. At 1-55 p.m. the tank was closed again, and estimations made of HCN-concentration to determine the extent to which the HCN was given up by the bale of cotton.
		3-0 p.m.	½	..	..	480	17	
		3-45 p.m.	1½	..	..	490	18	
	June 9 .	9-30 a.m.	19	..	..	75	3	
		10-30 a.m.	20	..	..	72	3	
	June 10 .	10-0 a.m.	44	..	..	34	1	
		11-30 a.m.	Second Charge	2 oz. in 2 oz. water	2 oz. in 2 oz. water	..	..	
		1-0 p.m.	47	..	..	255	6	
		1-30 p.m.	47	..	..	250	6	
	June 11 .	10-20 a.m.	68	..	..	84	2	
		1-0 p.m.	71	..	..	74	2	
		3-30 p.m.	73	..	..	53	1	
	June 12 .	10-0 a.m.	96	..	..	58	1	
		11-30 a.m.	97	..	..	31	..	
		2-15 p.m.	..	..	..	20	..	
		3-15 p.m.	1	..	..	22	..	
		4-15 p.m.	2	..	..	20	..	
	June 13 .	9-15 a.m.	21	..	..	33	..	
		10-15 a.m.	22	..	..	34	..	
		11-15 a.m.	23	..	..	35	..	
		12-15 p.m.	24	..	..	35	..	
	June 15 .	9-25 a.m.	45	..	..	27	..	
2	June 18 .	2-30 p.m.	Started	6 oz. in 6 oz. water	6 oz. in 6 oz. water	..	..	Experiment 2 was carried out on the same bale as Experiment 1. As in Experiment 1, estimations were made of the rate and extent to which the bale gave off HCN, with much the same results. Determinations were afterwards made of the moisture content of the cotton and jute of the bale. Moisture content of cotton = 9·0 per cent. Moisture content of jute = 8·3 per cent.
		3-0 p.m.	½	..	..	915	22	
		3-15 p.m.	¾	..	..	920	22	
		4-0 p.m.	1½	..	..	704	17	
	June 19 .	9-30 a.m.	19	..	..	183	4	
		11-20 a.m.	21	..	..	182	4	
		1-50 p.m.	23	..	..	170	4	
		4-15 p.m.	26	..	..	168	4	
	June 20 .	9-30 a.m.	43	..	..	124	3	
		9-30 a.m.	91	..	..	68	2	
3	Jun 26 .	10-35 a.m.	Started	4 oz. in 4 oz. water	4 oz. in 4 oz. water	..	..	Final moisture content of cotton = 10·9 per cent.
		11-0 a.m.	½	..	..	490	18	
		2-0 p.m.	3½	..	..	430	15	
	June 27 .	9-20 a.m.	23	..	..	134	5	
	June 29 .	9-15 a.m.	47	..	..	82	3	
	June 30 .	9-10 a.m.	71	..	..	72	3	

Table XXIV—*contd.*

Experiments with a Bale of Cotton in the Steel Tank—contd.

Expt. No.	Date	Time	Duration of exposure (hours)	Charges: Sodium cyanide	Charges: Sulphuric acid	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	Remarks
4	(1925) July 2 .	11-15 a.m.	Started	2 oz. in 2 oz. water	2 oz in 2 oz. water	..	..	Initial moisture content of cotton = 10 2 per cent.
		11-40 a.m	½	..	..	264	19	
		2-0 p.m.	3	..	..	190	14	
		4-0 p m.	5	..	..	180	13	
	July 3 .	10-0 a.m.	23	..	..	85	6	
	July 4 .	9-20 a m.	46	..	..	31	2	
5	July 9 .	9-50 a.m.	Started	2 oz. in 2 oz. water	2 oz. in 2 oz. water	..	..	
		10-15 a.m.	½	..	..	288	21	
		1-35 p.m.	4	..	.	146	11	
		2-45 p m.	Second Charge	2 oz. in 2 oz. water	2 oz. in 2 oz. water	..	..	
		3-20 p.m.	5½	..	..	422	15	
	July 10 .	9-15 a.m.	23		..	156	6	
	July 10 .	12-15 p.m.	Third Charge	2 oz in 2 oz. water	2 oz. in 2 oz. water	..	..	
		12-30 p m.	27	..	..	400	10	
		1-35 p m.	28	..	..	322	8	
		2-35 p m.	29	..	..	292	7	
		3-35 p m.	30	..	..	260	6	
		4-30 p m.	31	..	..	250	6	
	July 11 .	9-0 a.m.	47	..	..	180	4	
		11-0 a.m.	49	..	..	174	4	
	July 12 .	9-20 a m.	72	..	..	82	2	
6	July 14 .	9-30 a.m.	Started	2 oz. in 2 oz. water	2 oz. in 2 oz. water	..	..	
		10-0 a m.		..	..	304	22	
		11-0 a m.		..	..	254	18	
		12-0 noon		..	..	208	15	
		1-30 p.m.		..	..	138	10	
		2-30 p.m.	Second Charge	oz. in 2 oz. water	2 oz. in 2 oz. water	..	..	
		3-0 p.m.	5½	..	..	410	15	
		4-0 p.m.	6½	..	..	362	13	
	July 15 .	9-20 a.m.	24	..	..	190	7	
7	July 17 .	10-30 a.m.	Started	4 oz. in 4 oz. water	4 oz. in 4 oz water	..	..	
		11-0 a.m.	½	..	..	668	25	
		12-0 noon	1½	..	..	466	17	
		1-30 p.m.	3	..	.	366	13	
		2-30 p.m.	4	..	..	318	11	
		3-30 p.m.	5	..	..	292	11	
		4-30 p.m.	6	..	..	260	9	
	July 18 .	9-10 a.m.	23	..	..	152	5	
		10-10 a.m.	24	..	..	144	5	
		11-10 a.m.	25	..	..	142	5	
		12-10 p.m.	26	..	..	142	5	

In connection with the above experiments, it has to be observed that all except the first are re-fumigation experiments. Consequently, if there were any irreversible change, one would expect that in the experiments subsequent to the first less absorption would occur. On the other hand, when a bale has been subjected to long-period fumigation, HCN will have penetrated to some depth in the bale, and on exposure to the air it may take a considerable time for this HCN to escape. When the bale is re-fumigated, therefore, the loss of HCN absorbed in the previous fumigation may not have been completed and for this reason a lesser absorption may occur. In any case the above results do point to a diminished absorption on re-fumigation. It is clear from experiments 4, 5 and 6 that a charge of 2 oz. of cyanide is far too small to maintain for 24 hours a minimum concentration of 150 parts HCN per 100,000. From experiments 1, 3 and 7, it would appear that a single charge of 4 oz. of cyanide is also insufficient to maintain this minimum concentration for 24 hours, although in the last experiment No. 7, this charge appeared to be nearly sufficient. From experiments 5 and 6, it would appear, ignoring the above-mentioned possible effects in re-fumigation, that the method of using 4 oz. cyanide in successive charges of 2 oz. each at suitable intervals would just be sufficient to maintain the desired HCN-concentration. Alternatively, a single charge of rather less than 6 ozs. cyanide, as used in experiment 2, would appear to be necessary. From the blank experiments (page 101) it would appear that about half an ounce of this cyanide is used in producing the desired minimum concentration in the free space of the steel chamber.

It will be observed that in all these experiments the moisture content was high. The bale when first received was very damp and had to be allowed to condition for some days before use, but as the monsoon had set in it was not possible to get the bale into as dry a condition as desired. Moreover, the bale was very bulky, having evidently been lightly pressed. In these circumstances absorption was likely to have been on the high side.

Conclusion. The final conclusion drawn from these experiments was that when allowance was made for the fact that the tank was much more gastight than barges were likely to be, it would be necessary to allow for the use on a practical scale, under similar conditions, of one pound weight of sodium cyanide for every three bales of cotton which had to be fumigated, the total weight of cyanide being added in successive charges at suitable intervals. (Compare, however, pages 141-43).

3. Full-scale Experiments.

The first barge experiment was carried out on April 3-4, 1924. In the hold 79 bales of American cotton were arranged in three layers, the layers being separated by battens so as to leave plenty of free space for the circulation of the air. The fumigation outlet tube with its branches was laid out so as to ensure that a fairly even distribution of HCN throughout the hold should rapidly be attained. Test tubings were arranged for taking samples of the atmosphere within the hold at five

different points—the four corners and the centre. Small tins with copper gauze lids, (as described on page 84), each containing 20 grain-weevils, were placed among the bales at various points and levels. After generating the HCN, however, it was found that the concentration attained was very low, and about 4½ hours after the HCN had been generated from 3 lb. of sodium cyanide, the concentration was only 15 parts per 100,000, *i.e.*, only about 2 per cent. of the theoretical value. It was recognized that these low figures might be due to absorption of the HCN by the cotton bales, but as some preliminary laboratory experiments had given no evidence that the absorption might be so great, the result was attributed to an unsatisfactory hatch cover. When this cover was held up to the light, large numbers of pin-holes were discernible between the threads; it was therefore concluded that these afforded a ready means of escape to the HCN.

As a result of this experiment, a new hatch cover was obtained consisting of parallel doubled two-ply rubbered balloon fabric, aluminium-coated externally and having two layers of rubber, one internal and one between the plies of fabric. A repetition of the experiments with the new hatch cover proved quite successful. Some preliminary tests made with cotton absent showed that under these conditions the leakage over a comparatively long period had been reduced to satisfactory dimensions. The fumigation of cotton bales was therefore proceeded with. The same hold of the barge used in the first experiments was filled with 70 bales of American cotton, arranged as before in three layers separated by battens. The results obtained are summarized in the following Table.

TABLE XXV.

Day	Cotton present or absent	Charges of sodium cyanide added during the day	Total weight of sodium cyanide added during the day	Cumulative weight of sodium cyanide added without opening up	Maximum concentration of HCN recorded during the day		Concentration of HCN the next morning	
					Parts per 100,000	Percentage of theoretical value	Parts per 100,000	Percentage of theoretical value
1	Absent	2 of 1·5 lb	lb. 3	lb 3	208	28	102	14
2	Do	1 of 2 5 lb	2 5	2 5	157	26	57	9
3	Present	1 of 1 5 lb	2 5	2 5	75	12	5	1
4	Absent	1 of 2 lb 1 of 1 lb	.. 3	.. 3	.. 186	.. 25	.. 82	.. 11
5	..	1 of 2 lb	2	5	206	17	95	8
6	Present	2 of 2 lb 1 of 3 lb	.. 7	. 7	202	.. 12	. 18	.. 1
7	Do	3 of 2 lb	6	13	138		37	1
8	Do	3 of 2 lb	6	19	159	3	53	1
9	Do	4 of 2 lb	8	27	221	3	106	2

Where a horizontal line is drawn in the above table, it indicates that the hold was opened up between the experiments on the days concerned.

Grain-weevils present in the first and last experiments were all killed in each case.

The results obtained in the experiments with cotton present can only be explained on the view that HCN is being absorbed by the cotton bales. From the figures for concentration of gas on days 6 to 9, it is clear that the method of giving cumulative charges has by the 9th day caused the cotton to approach its maximum absorptive capacity. This is shown by the fall in the HCN-concentration—from the maximum (221) on the ninth day to 106 the next morning—being very similar to the falls experienced when cotton was absent. The progressive increase in HCN-concentration recorded each morning from the 7th to 10th days, as shown in column 7, can also only be satisfactorily explained on the hypothesis that absorption by the cotton bales is taking place. Experiments made in discharging the gas from the barge on the 10th and subsequent days confirmed this view. For after the hatch cover had been removed at one corner, the machine was run for 3 hours (without any charge of cyanide) so as to drive out the gas. The hold was closed again and determinations were made of the HCN-concentration. This was found to be about 25 parts per 100,000, the cotton having evidently given up some of the gas previously absorbed. This gas was again removed, and the operation on repetition yielded much the same result, the values for the HCN-concentration gradually rising from 10 to 21 parts per 100,000. Again the hold was opened, the fan run, and the hold closed for the night. Determinations of the HCN-concentration next morning indicated a concentration of 31 parts per 100,000. Later, the whole cover was completely removed, the engine kept running, and after one hour had elapsed determinations of HCN-concentration gave a value of only 2 parts per 100,000. These later experimental results show that when the atmosphere surrounding the cotton bales was rendered free of HCN, the cotton gave up some of the gas which it had absorbed, this process going on repeatedly when the HCN evolved was continuously removed. It will be observed that in the final experiment 27 lb. of cyanide were used in all for the 70 bales of cotton, *i.e.*, 1 lb. of cyanide for about 2·5 bales. As this experiment lasted for 4 days, however, and leakage and absorption will have been going on continuously, it is evident that if the whole charge had been given at intervals during a single day, a less weight would have been required to maintain the atmospheric HCN-concentration for the 24 hours only. In these circumstances it appears probable that the charge needed would not exceed 1 lb. of cyanide for every three bales of cotton, and might be considerably less.

From this experiment the following are the chief conclusions which were drawn :—

(1) That, as already stated, fumigation can be successfully carried out in a barge.

(2) That a comparatively large amount of chemicals (one pound weight of cyanide for every three bales of cotton) is necessary to produce a lethal

concentration of HCN because of the absorption of this gas by the cotton bales.

(3) That the removal of the HCN absorbed by the cotton presents no difficulty.

The successful issue of this experiment, combined with other results previously described, led the Government of India to issue a Notification under the Destructive Insects and Pests Act, 1914, prohibiting the importation of American cotton into India without fumigation with HCN, and confining such importation to the port of Bombay. The Notification in question is reproduced as Appendix V to this memoir.

4. General Conclusions on Cotton Absorption Experiments.

(1) That cotton does absorb HCN, whether the cotton be loose or baled, dry or damp.

(2) That damp cotton is rather more absorbent than dry cotton, the difference in absorption for extremes of humidity being about 50 per cent. of the dry absorption (pages 118, 122-28).

(3) That within the limits of temperature 86°—104° F. the actual temperature has very little influence on the rate or on the degree of absorption of HCN by cotton (pages 114, 121, 128).

(4) That absorbed HCN is desorbed fairly rapidly and completely, and that any irreversible chemical combination which may occur takes place only to a negligible extent (pages 121-22, 132, 134).

(5) That the degree of compression attained for the small experimental bales is insufficient to reveal whether the degree of compression of the cotton makes any appreciable difference either to the rate of absorption or to the final equilibrium (pages 110, 117, 122-23).

(6) That with dry charges of sodium cyanide the amount of cyanide required for satisfactory fumigation (*i.e.*, to ensure killing the grain-weevil) is about 0·10 per cent. of the weight of cotton (page 116) but that with water present in the cyanide-acid reaction about half this quantity, 0·05 per cent. of the weight of the cotton, is sufficient. This is an estimate from the small-scale experiments only (page 128). In either case the requirement of sodium cyanide corresponds to an absorption of HCN up to about 0·02 per cent. of the weight of the cotton at the given atmospheric concentration of 150 parts HCN per 100,000 air. With a bale of cotton, in a damp condition and fumigated in a chamber which leaks to some extent, the weight of sodium cyanide required is about 0·07 per cent. of the weight of the cotton bale or one pound weight of sodium cyanide for three bales of cotton (page 132). In a barge, where leakage is greater than in the single bale experiments, the weight of sodium cyanide required—when added during a period of 4 days– is about 0·08 per cent. of the weight of the cotton bales (page 134). From all these results, it was finally concluded that with charges given frequently the weight of sodium cyanide required for satisfactory fumigation on a practical scale should not exceed 0·07

per cent. of the weight of the cotton, or one pound weight of sodium cyanide for three bales of cotton. This is in addition to the sodium cyanide required for producing the desired HCN-concentration in the free space present. Subsequent experience on a practical scale, however, has shown that one pound weight of sodium cyanide is sufficient for the satisfactory fumigation of about five bales of cotton when good barges are used and when the bales are both dry and also highly-compressed (compare page 143).

(7) That fumigation with HCN can be satisfactorily carried out on a large scale in barges (page 134).

VII. Small-Scale Absorption Experiments with Jute.

The experiments with jute were carried out on the small-scale only. They comprised :—

(1) Experiments with baled jute ;
(2) Experiments with jute having different moisture contents ;
(3) Experiments at different temperatures ;
(4) Aspiration experiments.

(a) General.

These experiments were carried out in precisely the same manner as already described in the case of the cotton experiments, two small bales of jute hessian each weighing 60 grams being used. The first experiments showed at once that the absorption by the jute was considerable, thus :—

TABLE XXVI.

Fumigation of Small Jute Bales.

Expt. No.	Date	Time of generating HCN	Charge (air-dry) sodium cyanide (gram)	Time of estimation	Temperature ° F	HCN-concentration	
						Parts per 100,000 by volume	Percentage of theoretical value
1	(1925) June 17	2-45 p.m.	0 05	3-5 p.m.	86	30	14
				3-25 p.m.	86	*nil*	..
		3-40 p.m.	0 05	4-0 p.m.	86	63	17
	June 18	..	..	9-15 a.m.	85	33	5
	June 19	..	..	9-40 a.m.	85	30	7
	June 20	..	..	10-10 a.m.	84	33	8
2	June 25	2-0 p m	0·10	2-20 p.m.	84	66	15
	June 26	2-50 p.m.	0·10	3-10 p.m.	83	162	19
				9-30 a.m.	83	126	15
3	July 7	10-45 a.m.	0 10	11-5 a.m.	82	90	21
				1-30 p.m.	83	30	7
		2-0 p.m.	0 10	2-20 p.m.	84	180	21
				4-0 p.m	84	150	18
	July 8	..	..	10-0 a.m.	86	72	8

TABLE XXVI—*contd.*

Fumigation of Small Jute Bales—contd.

Expt. No.	Date.	Time of generating HCN	Charge (air-dry) sodium cyanide (gram)	Time of estimation	Temperature °F	HCN-CONCENTRATION	
						Parts per 100,000 by volume	Percentage of theoretical value
4	July 16 .	9-10 a m.	0 10	9-20 a m.	83	105	25
				10-20 a.m.	83	50	12
		11-0 a m.	0 10	11-15 a m.	83	195	23
				12-15 p.m.	83	160	19
	July 17 .	..	..	9-15 a.m.	83	110	13

In connection with experiment 2 above, aspiration experiments were carried out: after drawing through 84 litres of air, the amount of HCN recovered was equivalent to 0·018 gram sodium cyanide, while the concentration of HCN remaining in the fumigation desiccator accounted for 0·028 gram sodium cyanide, making a total of 0·046 gram sodium cyanide out of the 0·20 gram sodium cyanide actually used, thus leaving 77 per cent. of the cyanide unaccounted for. Hence this aspiration result appeared to be as unsatisfactory as those obtained with cotton.

In order to determine whether the aspiration result might be partly due to irreversible chemical combination of the HCN with the jute, some re-fumigation experiments were carried out. These gave the following results :—

TABLE XXVII.

Re-fumigation Experiments on a Small Jute Bale.

Expt. No.	Date	Time of generating HCN	Charge (air-dry) sodium cyanide (gram)	Time of estimation	Temperature °F	HCN-CONCENTRATION		REMARKS
						Parts per 100,000 by volume	Percentage of theoretical value	
5	(1925) July 20	10-35 a.m.	0 10	10-45 a.m.	83	120	28	The bale was removed after fumigation, exposed to the air overnight and then used for Experiment 6.
				11-45 a.m.	83	100	23	
				1-45 p.m.	84	107	25	
				3-45 p.m.	84	110	26	
				9-45 a m.	83	60	14	
	July 21	..	..	10-45 a.m.	84	67	15	
6	July 22	10-5 a.m.	0 10	10-15 a m.	84	125	29	The bale was removed after fumigation, exposed to the air overnight and then used for Experiment 7.
				11-15 a.m.	84	105	25	
				12-15 p.m.	83	92	22	
				2-15 p.m	84	102	24	
				4-15 p.m.	83	96	22	
	July 23	..	..	9-30 a.m.	83	45	11	
7	July 24	10-20 a.m.	0 10	10-30 a.m.	83	125	29	
				11-30 a.m.	83	110	26	
				12-30 p.m.	84	105	25	
				2-30 p.m.	84	95	22	
				4-30 p.m.	84	102	24	
	July 25	..	..	10-0 a.m.	83	66	15	

Making due allowance for the fact that the above results were obtained using a single small bale of jute while the results of experiments 1-4 relate to two such bales in each case, we see that the progress of absorption is much the same in both sets of experiments. This points to the absence to any large extent of irreversible chemical charge. The conclusion must therefore be drawn that the process is chiefly a reversible one—whether chemical or physical—and that the HCN which is absorbed in the fumigation desiccator is desorbed on exposure to air.

Considering now Tables XXVI and XXVII together, we see that the absorption capacity of jute is much greater than that of cotton (compare Tables XVI—XIX). From experiment 1 it appears that absorption by the 120 grams jute is complete within 18 hours when a charge of 0·10 gram of cyanide (air-dry) is used; and that this charge gives a final HCN-concentration of about 30 parts per 100,000, instead of about 212 parts per 100,000 usually obtained with this charge (page 121). With a total charge 0·20 gram cyanide (air-dry) as used in experiments 2, 3 and 4, the HCN-concentration varied somewhat, being 126 parts per 100,000 after 19 hours (experiment 2), 72 parts per 100,000 after 23 hours (experiment 3), and 110 parts per 100,000 after 24 hours (experiment 4). If we assume that equilibrium had been reached in each case, we have the result, striking a rough average, that the HCN-concentration in the desiccator is only 103 parts per 100,000 instead of 424 parts per 100,000 which would have been expected in blank experiments from the total of two charges of 0·10 gram each. To ensure a higher HCN-concentration in the desiccator even more than 0·20 gram cyanide would be needed, say 0·30 gram of cyanide (air-dry), of which about 0·10 gram would be needed for the desired HCN-concentration in the air in the desiccator, while 0·20 gram would be needed for HCN absorbed by the jute. In other words, when calculating the weight of cyanide required for saturating the jute at the given HCN-concentration, we must allow for an amount of sodium cyanide equal to 0·17 or say 0·2 per cent. of the weight of jute present. This, of course, is with no water present in the cyanide-acid reaction. The results obtained with water present are discussed on pages 139-141.

(b) Experiments with Samples of Jute having different Moisture Contents.

These experiments were made after it had been found how large a difference in the concentration of HCN was caused by adding two drops (0·075 gram) of water to each charge of sodium cyanide (0·10 gram) before adding the acid. The same charge was given in each experiment. Jute hessian from a cotton bale was used for the experiments: the damp jute was prepared by keeping in a "water-desiccator" and the dry jute by keeping in a "calcium-chloride desiccator" before the respective experiments. One pair of dry bales and one pair of damp bales were used in successive experiments first at a constant temperature and afterwards at

different temperatures. The results are given in Tables XXVIII and XXIX below :—

Table XXVIII.

Absorption Experiments with Jute at Constant Temperature (95°F.).

Expt. No.	Material	Date	Time of generating HCN	Time of estimation of concentration	HCN-concentration: Parts per 100,000	HCN-concentration: Percentage of theoretical value	Remarks
1	Jute, dry .	(1926) Mar. 12	10-0 a.m.	10-10 a.m. 10-25 a.m. 11-15 a.m. 12-15 p m. 1-37 p m. 2-30 p m. 3-30 p.m.	246 231 183 156 144 129 132	58 54 43 37 34 30 31	Moisture content = 3 3 per cent. Aspiration result = 0 024 gram sodium cyanide per bale, *i.e.*, 0 048 gram sodium cyanide for 2 bales. Sodium cyanide unchanged *nil*.
2	Jute, damp .	Mar. 15 .	10-35 a.m.	10-40 a m. 10-50 a m. 11-30 a m. 12-15 p m. 1-35 p.m. 2-30 p.m. 3-30 p.m. 3-45 p.m	219 195 135 135 126 123 102 105	51 46 32 32 30 29 24 25	Moisture content = 23 0 per cent. Aspiration result = 0 016 gram sodium cyanide per bale, *i.e.*, 0·032 gram for 2 bales. Sodium cyanide unchanged = 0·002 gram

The above experiments indicate that very damp jute absorbs HCN to a slightly greater extent than very dry jute. The effect of moisture is, however, very small compared with the large total absorption. This is confirmed by the results obtained in the experiments where the temperature was raised in stages during the fumigation (Table XXIX).

Table XXIX.

Absorption Experiments with Jute at Different Temperatures.

These experiments were carried out on the same lines as the previous experiments, the charge of sodium cyanide used in each experiment being 0·10 gram with two drops of water.

Expt. No.	Material	Date	Time of generating HCN	Time of determining concentration	Temperature °F	HCN-concentration: Parts per 100,000 by volume	HCN-concentration: Percentage of theoretical value	Remarks
1	Jute, dry	(1926) Mar. 8 Mar. 9	11-20 a.m.	11-30 a.m. 2-40 p.m 3-45 p.m. 10-40 a.m.	81 95 104 79	213 159 132 67	50 37 31 16	Moisture content = 2·1 per cent. Aspiration result = 0 019 gram sodium cyanide per bale, *i.e.*, 0·038 gram sodium cyanide for 2 sample bales.

TABLE XXIX—*contd.*

Absorption Experiments with Jute at Different Temperatures—contd.

Expt. No.	Material	Date	Time of generating HCN	Time of determining concentration.	Temperature °F	HCN-CONCENTRATION		REMARKS.
						Parts per 100,000 by volume	Percentage of theoretical value	
2	Jute, dry	Mar. 18	9-10 a.m.	9-25 a.m. 12-15 p.m. 3-15 p.m.	79 95 104	260 150 127	61 35 30	Moisture content = 3.2 per cent. Aspiration result = 0·018 gram sodium cyanide per sample bale, *i.e.*, 0·036 gram sodium cyanide for 2 sample bales. Sodium cyanide unchanged = 0·005 gram.
3	Jute, damp	Mar. 10	9-20 a.m.	9-30 a.m. 12-15 p.m. 3-45 p.m.	80 95 104	166 133 118	39 31 28	Moisture content = 23·1 per cent. Aspiration result = 0.014 gram sodium cyanide per sample bale, *i.e.*, 0·028 gram sodium cyanide for 2 sample bales. Sodium cyanide unchanged = 0.001 gram.

The aspiration results are again unsatisfactory, and again from one-half to two-thirds of the charge of sodium cyanide is left unaccounted for.

When these results are compared with those previously described, it is evident that the most striking feature is the high absorptive capacity of the jute. After 5—6 hours' exposure in the fumigation desiccator, the concentration of HCN is much the same whether the bales have been kept at a uniform temperature or the temperature has been varied, nor does the moisture content of the jute make any appreciable difference. It may be observed that a much longer time is taken by the jute to reach a condition of equilibrium than is taken by cotton (compare page 128). From the results of the blank experiments discussed on page 98 it is clear that, in the absence of the jute, the HCN-concentration from 0·10 gram sodium cyanide would have been about 312 parts per 100,000. From the values of HCN-concentration given above, it appears that the 120 grams of jute, dry or damp, absorb in 6 hours about 60 per cent. of the HCN generated from the 0·10 gram charge of sodium cyanide. Assuming that equilibrium had been attained in experiment 1, Table XXIX, by the time 24 hours had elapsed, it appears that of the 0·10 gram sodium cyanide used, about 20 per cent. is required to account for the HCN-concentration in the desiccator, leaving 80 per cent. to be accounted for by HCN-absorption by the jute. In this case, however, the final atmospheric HCN-concen-

67 parts per 100,000 and is therefore well below the desired minimum of 150 parts per 100,000. To ensure the latter concentration being attained it appears probable that the amount of sodium cyanide required will not be less than 0·10 per cent. of the weight of the jute.

(c) Conclusions.

The following are the chief conclusions which may be drawn from this section :—

(1) That jute has a higher and more rapid absorptive power than cotton for HCN, absorbing about 0·04 per cent. of its own weight of HCN at an atmospheric HCN-concentration of 150 parts HCN per 100,000 air.

(2) That the absorptive power of jute is only to a small extent dependent on its moisture content, being however slightly greater for damp jute than for dry (page 139).

(3) That the absorptive power of jute remains practically unchanged throughout the temperature range 86°—104° F. (pages 139 - 40).

(4) That for the saturation of jute with HCN in an atmosphere containing 150 parts HCN per 100,000, the amount of sodium cyanide required is about 0·10 per cent. of the weight of the jute (above).

VIII. General Discussion of Results : Practical Considerations.

Although the results obtained have already been discussed in detail in connection with each experiment separately, it is convenient here to discuss the various results in relation to one another, and to the general question as to what constitutes "satisfactory fumigation" on a practical scale.

In the first place, the conclusion has been reached (pages 104, 106, 109) that under Bombay conditions the exposure of the grain-weevils or the boll-weevils to a HCN-concentration of 150 parts per 100,000 (by volume) for 20 hours will be sufficient to kill them. Alternatively, an exposure for 4 hours to a HCN-concentration of 450 parts per 100,000 will also be sufficient to kill the boll-weevil (page 109).

The conclusion was reached in connection with the cotton absorption experiments that the weight of sodium cyanide required for the saturation of the cotton alone is about 0·05 per cent of the weight of the cotton (page 128). In connection with the jute experiments the conclusion was reached that for the saturation of the jute the amount of sodium cyanide required is about 0·10 per cent. of the weight of the jute (page 140). The amounts required are rather greater under damp conditions than under dry conditions, but the conditions of temperature may be ignored so far as the HCN-absorption is concerned. Considering 100 cotton bales of standard weight (500 lb.) with standard tare (20 lb.) we have to allow for a weight of 48,000 lb. of cotton and 2,000 lb. of jute. With the percentage requirements of sodium cyanide referred to above, it follows that for 100 bales of cotton the sodium

cyanide required is 24 lb. for the cotton and 2 lb. for the jute, making 26 lb. in all. Evidently, although the jute is much more absorbent of HCN than the cotton, the comparatively small amount of jute present makes it of practically negligible account when calculating the quantity of sodium cyanide required for fumigation purposes. Thus we may conclude that the quantity of sodium cyanide required to saturate the cotton bales to the desired concentration is about 0·05 per cent. of the weight of the bales, or about one pound weight of cyanide to every four bales of cotton.

It is important to observe that in calculating the total weight of cyanide required due allowance must be made for the amount required to give the desired HCN-concentration in the free space, *i.e.*, space not occupied by the cotton.

On the large scale a further difficulty is encountered that a gradual fall in HCN-concentration cannot be entirely prevented even when no cotton is present, owing to the impossibility of preventing some leakage. This fact entails the practical consequence that a greater charge of cyanide must be given than that calculated simply from the weight of the cotton bales. Thus from the steel chamber experiments it was concluded (page 132) that one pound of sodium cyanide would be sufficient for only three bales of cotton, while from the barge experiment it appeared that one pound of sodium cyanide was sufficient for only 2·5 bales of cotton (page 134). In these experiments it may be noted that the final HCN-concentration was below that of 150 parts per 100,000 which was found to be desirable for a 20 hours' exposure.

Another point which has to be considered is the actual period during which the weevils are exposed to the desired HCN-concentration. If the HCN-concentration in the barge were maintained uniformly at 150 parts per 100,000, it is evident that the jute covering and the cotton just below it would for a period experience a less HCN-concentration than the normal, because while the jute is actually absorbing HCN at the commencement of fumigation there must be a fall in HCN-concentration in the immediate vicinity. Now it is on the underside of the jute covering where boll-weevils may be expected to occur; indeed, one such weevil has in fact been found in this very position. Such weevils would therefore be screened for a time by the more absorbent jute covering. However, the HCN would gradually pass inwards because the outer layers would act as carriers of the HCN, continuously absorbing it on the high HCN-concentration side and desorbing it on the low HCN-concentration side. A stage would no doubt be reached very quickly when the jute covering and the outer cotton would be practically saturated with HCN, and from this time onward the HCN-concentration in the interstices of the outer cotton would be much the same as that in the air spaces of the barge. Hence, in view also of the fact that with the Liston Cyanide Fumgiator the air is kept in constant circulation, it is legitimate to suppose that the effect referred to is of small dimensions only.

However, it is no doubt best to make provision for this effect. It has already been pointed out that fumigation at an actual HCN-concentration of 450 parts per

100,000 appears to be effective in 4 hours. With uncertainty prevailing as to the time needed for the saturation with HCN of the jute covering and the outer layers of cotton, there is considerable advantage in using a long-period fumigation at a comparatively low HCN-concentration instead of a short-period fumigation at a high HCN-concentration. It is better still, however, to combine the advantages of both methods. In actual practice this is in fact attempted. Fumigation is carried on over a period of approximately 20 hours : it is begun early on one morning and finished the following morning. During the day large charges of HCN are generated at short intervals, so that a very high concentration is maintained throughout the day. When the barge is left for the night the HCN-concentration must not be lower than 200 parts per 100,000. In deciding on the charge to be given before the barge is left for the night due regard is paid to the rate of fall of concentration experienced just previously.

Some idea of the concentrations attained and the method of giving the charges in practical working is conveyed by the abstract Tables which form Appendix IV. This is given in two parts : Table I gives some typical results obtained during the monsoon, while Table II gives typical results obtained after the monsoon. It is at once evident that more sodium cyanide is required during the monsoon, no doubt on account of the greater absorption by the cotton which then takes place. It is, moreover, a remarkable fact that less cyanide is needed for the fumigation than was anticipated from many of the experiments described in the foregoing pages. Reference to Appendix IV will show, however, that in the majority of cases the " next morning HCN-concentration" has not in fact been as high as 150 parts per 100,000. An exception exists in the case of Barge No. 13 fumigated on August 26, 1926 and September 1, 1926. This, however, was a barge which leaked only to a very slight extent; furthermore, the consumption of cyanide in the first case was actually 1 lb. for 3·3 bales,—not very different from the figure previously deduced. In the second case one pound of cyanide was required for 4·7 bales, but here the fumigation did not extend over the full 24-hour period. On the whole, therefore, the monsoon results confirm the results of the steel tank experiments, which were also carried out in the monsoon.

The post-monsoon results, as previously pointed out, show that less cyanide is needed under these conditions. This is, of course, due to the fact that dry cotton does not absorb so much HCN as damp cotton. Considering only the results where the "next-morning concentration" was up to standard, we see that with Barge No. 8 on November 8, 1926, and on November 29, 1926, together with Barge No. 23 cn November 24, 1926, and with Barge No. 30 on November 30, 1926, one pound of cyanide under post-monsoon conditions and with good barges will suffice for about 5·5 bales of cotton.

It should be observed, however, that the cotton in these barges was very highly compressed (about 40 lb. per cubic foot) and therefore very different from the bales on which the experiments had been carried out. From these results the deduction

is therefore drawn that when the bales being fumigated are highly compressed, the requirement of cyanide is decidedly less.

IX. Conclusions.

The conclusions which may be drawn from the various experiments are as follow :—

(1) It is necessary to expose the grain-weevil *Sitophilus oryzae* to an atmosphere containing about 150 parts of HCN per 100,000 parts of air for about 20 hours in order to ensure killing it outright (pages 104, 106). Short exposures at high HCN-concentration are not so satisfactory as long exposures at lower HCN-concentrations (page 105).

(2) The Mexican boll-weevil is relatively more sensitive than the grain-weevil to exposures for a comparatively short time at high HCN-concentrations (page 108). It is inferred that an exposure of Mexican boll-weevils to an atmosphere containing at least 150 parts of HCN per 100,000 parts of air for 20 hours will be sufficient to kill them, especially if for some hours the HCN-concentration is considerably higher than 150 parts per 100,000 (page 109).

(3) The actual lethal HCN-concentration and period of exposure for both grain-weevils and boll-weevils depend upon the vitality of the weevils, and this is greatly affected by the temperature, and possibly by the humidity (pages 103—4, 106).

(4) Cotton, whether baled or in the loose state, rapidly absorbs up to about 0·02 of its own weight of HCN (page 135) in an atmosphere containing 150 parts HCN per 100,000 air.

(5) Cotton rapidly desorbs HCN (page 135).

(6) The absorptive power of cotton depends somewhat upon its moisture content: cotton which had been dried over fused calcium chloride had a lower absorptive power than air-dry cotton, while the latter was less absorptive than very damp cotton (pages 118, 122—28).

The results obtained with cotton dried over concentrated sulphuric acid were anomalous, presumably owing to the cotton taking up some of the acid from the vapour, the acid itself being a strong absorbent of HCN (pages 98—99, 122—23).

(7) The absorptive power of cotton remains practically unchanged throughout the range of temperature 86° F.—104° F. (pages 114, 121, 128).

(8) For the saturation of cotton with HCN in an atmosphere containing 150 parts HCN per 100,000 air by volume the amount of sodium cyanide required is about 0·05 per cent. of the weight of the cotton (page 135).

(9) Jute, as used for the gunny covering of cotton bales, has a much higher and more rapid absorptive power than cotton for HCN, absorbing

about 0·04 per cent. of its own weight of HCN in an atmosphere containing 150 parts HCN per 100,000 (page 141).

(10) The absorptive power of jute is not greatly affected by its moisture content, being slightly greater and more rapid for damp jute than for dry jute (page 139).

(11) The absorptive power of jute is practically independent of the temperature throughout the range 86°F.—104° F. (pages 139—40).

(12) For the saturation of jute with HCN in an atmosphere containing 150 parts HCN per 100,000, the amount of sodium cyanide required is about 0·10 per cent. of the weight of the jute (page 140).

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APPENDIX I.

Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant.

Precis	Author	Original	Abstract
Experiments on destruction of larvæ in roots by gaseous hydrogen cyanide. Best results are obtained under vacuum conditions.	E. R. Sasscer . H. L. Sandford .	*J. Agric. Res.* 1918, *15*, 133.	*Physiol, Abstrs.* 1919, *4*, 109. *Chem. Abstrs.* 1919, *13*, 357.
Destruction of larvæ of black walnut worm on orchids by hydrogen cyanide.	E. R Sasscer . H. F. Dietz .	*J. Agric Res.* 1918, *15*, 263.	*Physiol, Abstrs.* 1919, *4*, 199.
Directions for preparation and use of gaseous hydrogen cyanide for destroying vermin in clothes, and eggs, larval, pupal and imago stages of insects.	W. G. Liston . S. N. Goré.	*Proc. Asiatic Soc. Bengal* 1919, *15*, 109.	*Chem. Abstrs.* 1920, *14*, 1404.
Study of effects of hydrogen cyanide on tomato plant tissues. Permanent injury results from a dose of 0 007 gm. potassium cyanide per cubic foot of air.	E. E. Clayton .	*Bot. Gaz.* 1919, *67*, 483	*Physiol, Abstrs.* 1919, *4*, 367.
Use of hydrogen cyanide as insecticide compared with other substances.	G. Bertrand . . M. Rosenblatt.	*Compt. rend.* 1919, *168*, 911.	*Chem. Abstrs.* 1919, *13*, 1740.
Action of hydrogen cyanide on organisms of plants ; spores of *B subtilis* and *B. mesentericus vulgatus* are destroyed by 3 5 vols. of hydrogen cyanide in 100 vols. of air in 24 hours at 13°—14°C *Mucor mucedo* and *M. stolonifer* are destroyed by 3 5 vols. Penicillium glaucum by 4 vols. *Tilletia tritici* by 2 vols. in 24 hours at 16°C. Seeds of *Triticum vulgare Hordeum distichum* and *Beta vulgaris* exposed to 2 vols. and then ventilated for 3 days at 25°C are not injured. Gas is more effective at 16° than at 10°C.	J. Stoklasa . .	*Compt. rend* 1920, *170*, 1404.	*Nature*, 1920, *105*, 539. *J. Chem. Soc.* 1920, *118*, i, 516. *Physiol. Abstrs.* 1921, *5*, 499. *Chem. Abstrs.* 1920, *14*, 2674.
Effect of hydrogen cyanide on plants. Green cress is killed in 10 days by 0 24 mg. of acid per litre of air. 71 3 mg. of acid per litre of air have same effect on seeds in water; 2 375 mg. impair their germination and development.	C. Wehmer . .	*Biochem. Zeitsch* 1918, *92*, 364.	*J. Chem. Soc.* 1920, *118*, i, 273. *J. Soc. Chem. Ind.* 1920, *39*, 167A.
Results of comparative tests of efficacy of liquid and gaseous hydrogen cyanide in killing scale insects and ladybird beetles in citrus trees. Gas is more effective at top of tree.	H. J. Quayle .	*Calif. Agr. Expt. Sta. Bull.* 1919, *308*, 393.	*Chem. Abstrs.* 1920, *14*, 86.
Experiment to determine risk of poisoning during disinfection of rooms by hydrogen cyanide. 670 gm. of acid were liberated in room of 42 5 cu. m. All moths, flies, mice and ants were killed in 15 hours. Gas was removed by 10 hours ventilation, except in case of cushions.	H. Fühner . .	*Pharm. Zentr. h.* 1919, *60*, 487.	*J. Soc. Chem. Ind.* 1920, *39*, 79A. *Chem. Abstrs.* 1920, *14*, 1003.

APPENDIX I—*contd.*

Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant—contd.

Precis	Author	Original	Abstract
Comparative tests of toxic action of various gases on insects, seeds and fungi. Hydrogen cyanide has less effect than chloropicrin and the same as cyanogen chloride in fumigating stored products.	I. E. Neifert . G. L. Garrison .	*U. S Dept Agr. Bull.* 1920, *893*, 1.	*Chem. Abstrs.* 1921, *15*, 140.
Comparative action of hydrogen cyanide, and various cyanogen derivatives (cyanogen chloride and bromide, methyl cyanoformate and "Cyclon" which consists of methyl and ethyl esters of cyanoformic acid and "Cl. ester") on cats, mice, insects such as bedbugs and cockroaches, green plants and wheat seeds.	F. Flury . . A. Hase.	*Munch med. Woch.* 1920, *67*, 779.	*Chem Abstrs.* 1921, *15*, 722.
Method of using apparatus for generating gaseous hydrogen cyanide for destroying insects and fungi on citrus trees.	....	*Scient. Amer.* 1922, *3*, No. 5.	
Investigation of most favourable conditions for use of gaseous hydrogen cyanide for destruction of bacteria It is more effective with increase in temperature, low moisture content and in strong light. *Staphylococcus aureus and B coli* on a dry substratum are killed in 24 hours by a concentration of 2 25—2 5 per cent. by vol at 24—28°C, in an atmosphere of 15—20 per cent. saturation in diffused light.	E. Teichmann W. Nagel.	*Z Hyg. Infektionskrankh.* 1920, *90*, 401.	*Chem. Abstrs.* 1921, *15*, 4017.
Experiments on control of San Jose scale. Hydrogen cyanide did not control the scale completely and all strengths injured plant.	K. C. Sullivan.	*Missouri Agr Expt Stat. Bull.* 1921, *117*, 1.	*Chem. Abstrs.* 1921, *15*, 3174.
Description of method for suppression of Red Scale and other "hard" scale insects in citrus trees by means of hydrogen cyanide.	C. P. Lounsbury .	*J. Dept Agr. Union. S. Africa* 1921, *2*, 437.	*Chem. Abstrs.* 1921, *15*, 3174.
Summary of work on methods of using hydrogen cyanide for fumigating purposes.	G. Harker . .	*J. Soc. Chem. Ind.* 1921, *40*, 183T.	
Method of using gaseous hydrogen cyanide for destroying lice, grain and vegetable pests. 0 6 per cent. by volume is effective in ½ hour. Method of recovery of hydrogen cyanide from atmosphere.	Deut. Gold & Silber-Scheid. vorm. Rœssler.	*G. P.* 347, 847-8. Jan. 25, 1922.	*Chem. Zentr.* 1922, *93*, II, 1215.
Details of fatality resulting from use of hydrogen cyanide for destroying moths.	H. Heller . .	*Zeitsch. angew Chem.* 1920, *33*. Aufsatzteil 157.	*Chem. Abstrs.* 1921, *15*, 3719.
Danger resulting from use of hydrogen cyanide for disinfecting buildings. Cyklon is less objectionable in this respect.	Wolf . . .	*Pharm. Zeit.* 1922, *67* 316.	*Chem. Abstrs.* 1922, *16*, 2379.
Opposition to use of hydrogen cyanide or disinfecting buildings on account of fatalities.	E. Gilbricht . .	*Desinfektion* 1921, *6*, 353.	*Chem. Zentr.* 1922, *93*, II, 59.

APPENDIX I—*contd.*

Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant—contd.

Precis	Author	Original	Abstract
Advantages and disadvantages of use of compressed hydrogen cyanide for fumigating purposes.	E. V. Espenhahn .	*Chem. & Met. Eng.* 1922, *26*, 939.	
Use of hydrogen cyanide in inhabited places.	Selter . . .	*Deut. med. Wchschr.* 1919, *45*, 872.	
Technique of use of hydrogen cyanide .	E. V. Skramlik .	*Hyg. Rundschau.* 1919, *29*, 71.	
Survey of hydrogen cyanide as insecticide.	W. C. Liston . S. N. Gore.	*Indian J. Med. Res.* 1919, *6*, 40.	
Use of hydrogen cyanide for destruction of rats.	C. L. Claremont .	*J. Soc. Chem. Ind.* 1921, *40*, 327R.	*Chem. Abstrs.* 1922, *16*, 310.
Description of portable hydrogen cyanide generator and process for fumigating small compartments of ships.	C. M. Fauntleroy .	*Public Health Repts.* 1921, *Reprint No. 673.*	*Chem. Abstrs.* 1922, *16*, 777.
Description of apparatus for destroying destructive bugs on trees by hydrogen cyanide.	....	*Scient. Amer.* 1921, No. 22.	
Advantages of heat over hydrogen cyanide as insecticide.	J. P. Calderwood .	*Heating & Ventilating Mag.* 1922, *19*, 25.	*J. Ind. Hyg.* 1922, *4*, 48A.
Non-bactericidal action of hydrogen cyanide.	Deut. Ges. für Schädlingsbekämpfung.	*Chem. Zeit.* 1922, *46*, 281.	*Chem. Zentr* 1922, *93*, II, 989.
Probable replacement of hydrogen cyanide for fumigating ships by easily detected cyanogen chloride.	....	....	*Chem. & Met. Eng.* 1922, *27*, 39 : 529. *J. Soc. Chem. Ind.* 1922, *41*, 419R.
Inhibition of respiratory and fermentative activity of animal cells by mixtures of narcotics and hydrogen cyanide.	W. Lipschitz . A. Gottschalk.	*Pflügers Arch.* 1921, *191*, 1 : 33.	*Chem. Abstrs.* 1922, *16*, 2525.
Influence of hydrogen cyanide on respiration and assimilation of living cells.	O. Warburg . .	*Zeitsch. Elektrochem.* 1922, *28*, 70.	*Chem. Zentr.* 1922, *93*, I, 1076. *J. Chem. Soc.* 1922, *122*, I, 787.
Action of hydrogen cyanide on various bacteria and yeast.	E. V. Skramlik .	*Centr. Bakt. Par.* 1919, Abt. I. *Orig.* *83*, 386.	*Chem. Abstrs.* 1922, *16*, 2707.
Bibliography of use of hydrogen cyanide as disinfectant.	Wolf . . .	"*Off Gesundheitspflege*" 1922, *7*, 126.	*Chem. Zentr.* 1922, *93*, IV, 342. *Chem. Abstrs.* 1923, *17*, 788.
Use of hydrogen cyanide and mixtures containing hydrogen cyanide by French during war. French war production of Vincennite.	C. J. V. Nieuwenburg.	*Chem. Weekblad.* 1922, *19*, 326.	*Chem. Zentr.* 1922, *93*, IV, 984.
Experiments on use of mixtures of hydrogen cyanide and lachrymators for ship fumigation. Advantages of cyanogen chloride.	....	*Pub. Health Rpts.* 1922, *37*, 2744.	*Chem. Abstrs.* 1923, *17* 1522.

APPENDIX I—*contd.*

***Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant*—contd.**

Precis	Author	Original	Abstract
Superheating and fumigation with carbon disulphide and hydrogen cyanide proved effective in killing larvæ present in wheat stored in elevators.	M. A. Hussain .	*Rept. Operations Dept Agr. Punjab* 1920-21, Part 2, 52.	*Chem. Abstrs.* 1923, *17*, 847.
Absorption of hydrogen cyanide by foodstuffs during fumigation of liner.	J. D. Jansen . W. Schut. M. Wagnenaar.	*Chem. Weekblad.* 1922, *19*, 373.	*J. Soc. Chem. Ind.* 1922, *41*, 873A. *Chem. Zentr.* 1922, *93*, IV, 1019.
Description of process of fumigation of yacht with hydrogen cyanide.	....	*Engineering*, 1922, *114*, 309.	
Fumigation of green-houses with hydrogen cyanide.	E. R. Sasscer . C. A. Wiegel .	*J. Econ. Entomology*, 1922, *15*, 200.	*Chem. Abstrs.* 1922, *16*, 3726.
		J. Econ. Entomology, 1923, *16*, 84.	*Chem. Abstrs.* 1923, *17*, 1525.
Discussion of use of hydrogen cyanide as insecticide, parasiticide and vermicide.	E. Bonjean .	*Rev. d'Hyg.* 1922, *44*, 776.	*Chem. Zentr.* 1922, 93 IV, 1100.
			Chem. Abstrs. 1923, *17*, 605.
Use of hydrogen cyanide for ant control on board ship.	W. T. Clark . .	*J. Econ. Entomol.* 1922, *15*, 329.	*Chem. Abstrs* 1922, *16*, 4284.
Development of fumigating gas containing hydrogen cyanide and cyanogen chloride by C. W. S.	....	*Amer. Assoc. Advancement Sci.*	*J. Soc. Chem. Ind.* 1923, *42*, 98.
Bibliographies of use of hydrogen cyanide as insecticide.	....	....	*J. Ind. Eng. Chem.* 1922, *14*, 1148.
Resistance of scale insects in some localities to hydrogen cyanide.	H. J. Quayle .	*J. Econ. Entomol.* 1922, *15*, 400.	*Chem. Abstrs.* 1923, *17*, 446.
Toxicity of hydrogen cyanide for Phlebotomes.	E. Pringeault .	*Compt. rend. Soc. biol* 1922, *87*, 846.	*Chem. Zentr.* 1923, *94*, 1, 802.
			Chem. Abstrs. 1923, *17*, 1080.
Absorption of hydrogen cyanide by food-stuffs during fumigation.	....	*U. S. Bur. Chem.* .	*Chem. & Met. Eng.* 1923, *28*, 829.
Dangers of disinfection by hydrogen cyanide.	C. Marini . .	*L'Igiene Moderna.* 1921, *14*, 294.	
Experiments on disinfection and destruction of rats by hydrogen cyanide.	L. Piras . .	*L'Igiene Moderna.* 1921, *15*, 101; 129.	*Chem. Abstrs.* 1923, *17*, 1682.
Apparatus for fumigation by hydrogen cyanide.	....	*Lancet*, 1923, *5207*, 1223.	
Use of hydrogen cyanide by public services for disinfection.	P. Almasio . .	*Riv. ing. sanit. edilizia moderna*, 1921, *17*, 97; 105.	*Chem. Abstrs.* 1923, *17*, 1682.
Use of hydrogen cyanide for disinfection.	A. Filippini . .	*Ann. d'ig* 1921 *31*, 419.	
Absorption and retention of hydrogen cyanide by fumigated food products.	E. L. Griffin . I. E. Neifert. N. Perrine. A. B. Duckett.	*U. S. Dept. Agric. Bull.* 1923, *1149*, 1.	*Chem. Abstrs.* 1923, *17*, 2620.

APPENDIX I—*contd.*

Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant—contd.

Precis	Author	Original	Abstract
Inefficiency of hydrogen cyanide against plague bacilli.	N. Bruni . .	*L'Igiene Moderna* 1922, *15*, 353.	*Chem. Abstrs.* 1923, *17*, 2761.
Description of machine for fumigation of ships with hydrogen cyanide.	W. G. Liston . S. N. Gore.	*J. Hyg.* 1923, *21*, 199 .	*Chem. Abstrs.* 1923, *17*, 2929.
Account of development of fumigation of ships by hydrogen cyanide and methods employed.	G. W Monier-Williams. P. G Stock . .	*J. Soc. Chem Ind* 1923, *42*, 1103. *Public Health Rep.* 1923, *19*.	*Journ. R. A. M. C.* 1924, *42*, 147.
Use of hydrogen cyanide for protection against clothes moths.	E. A. Back . .	*U S Dept Agric Farmers, Bull.* 1923, *1353*.	*Nature*, 1923, *112*, 881.
Use of hydrogen cyanide against vermin	Edit Rep . .	*Chem & Met.* 1923, *29*, 1095.	
Description of buildings for umigation of railway cars.	....	*Chem. & Met.* 1923, *29*, 1160.	
Use of hydrogen cyanide as bactericide	W. C. Reynolds .	*Lancet.* 1922, ii, 834.	
Sanitary applications of hydrogen cyanide.	J. S. Beavis . .	*Bull. Office Intern. d'hyg. pub. Par.* 1922, *14*, 248.	
Use of hydrogen cyanide with cyanogen chloride as lachrymatory warning.	....	*U. S. Quarantine Reg. Amend. No. 6.*	*Ind. Eng. Chem.* 1924, *16*, 267.
Advantages of hydrogen cyanide as insecticide.	Lp. de Costobadie .	*Nature*, 1923, *112*, 791 .	
Death penalty carried out by hydrogen cyanide.	....	*Scient. Amer.* 1924, *130*, 231.	
History of use of hydrogen cyanide as insecticide.	R. S. Woglum	*J. Econ. Entomol.* 1923, *16*, 518.	*Chem Abstrs.* 1924, *18*, 1028.
Use of hydrogen cyanide to clear out bed-bugs.	J. H. Collins	*Scient. Amer.* 1924, *130*, 392.	
Use of hydrogen cyanide for rat destruction in ships.	....	*Arch. de med. et pharm. nav.* 1922, *120*, 491.	
Fatalities from hydrogen cyanide in fumigation.	....	*Weekly Bull. U. S. Dept. Health* 1923, *12*, 265.	
Recent developments in use of hydrogen cyanide for greenhouse fumigation.	E. R. Sasscer . C. A. Weigel.	*J. Econ. Entomol.* 1924, *17*, 214.	*Chem. Abstrs.* 1924, *18*, 2404.
Survey of recent progress in use of hydrogen cyanide as fumigant.	C. C. McDonnell .	*Ind. Eng. Chem.* 1924, *16*, 1010.	
Effect of hydrogen cyanide for ship fumigation on food materials. Benzidine copper acetate test for hydrogen cyanide.	P. Buttenberg . H. Weiss.	*Z. unters. nahr. Genussm.* 1924, *48*, 104.	*Analyst*, 1924, *49*, 533. *J. Soc. Chem. Ind.* 1924, *43*, 994B. *Chem. Abstrs.* 1924, *18*, 3657.
Lecture on fumigation by hydrogen cyanide.	W. Glen-Liston .	*J. Soc. Chem. Ind.* 1925, *44*, 367.	*J. Soc. Chem. Ind.* 1924, *43*, 1296.
Absorption and retention of hydrogen cyanide during fumigation of food products.	E. L. Griffin . . E A Back.	*U. S. Dept. Agric. Bull.* 1307 (1924).	*Chem. Abstrs.* 1925, 682. *Ind. Eng. Chem.* (News) 1925, *3*, (1) 5.

APPENDIX I—*contd.*

***Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant*—contd.**

Precis	Author	Original	Abstract
Precautions against absorption of hydrogen cyanide in disinfection uses.	A. Cavidalli . .	*Arch. ital. de biol.* 1924, *73*, 61. *Ber. ges. physiol.* 1924, *27*, 468.	*Chem. Zentr.* 1925, *96*, I, 409.
Efficiency of hydrogen cyanide in fumigation of warehouses filled with sacks. Effect on various plant pests.	E. A. Back . . R. T. Cotton.	*J. Agric. Res.* 1924, *28*, 649.	*Chem. Zentr.* 1925, *96*, I, 566.
Lethal concentrations of hydrogen cyanide for various insects infesting railway coaches.	L. Kulikow . .	*Trans Inst. Pure Chem. Reagents* 1924, (3) 19, (Russ).	*Chem Zentr.* 1925, *96*, I, 721.
Successful use of hydrogen cyanide in fumigation against hide beetles.	....	*Chem. & Met. Eng.* 1925, *32*, 259.	
Historical review of the use of hydrogen cyanide as a fumigating agent.	W. G. Liston .	*J. Soc. Chem. Ind.* 1925, *44*, 367.	*Chem. Abstrs.* 1925, *19*, 1921. *J. Soc. Chem. Ind.* 1925, *44*, 523B. *Chem. Zentr.* 1925, *96*, II, 230.
Consumption of materials and output of gas by various types of hydrogen cyanide fumigators.	G. Harker . .	*J. Soc. Chem. Ind.* 1925, *44*, 847.	*Chem. Zentr.* 1926, *97*, i.
Criticism of above article . . .	W. G. Liston .	*J. Soc. Chem. Ind.* 1925, *44*, 891.	
Exposure to low concentrations of hydrogen cyanide stimulates plant growth.	G. Gassner . .	*Ber. deut. bot. Ges.* 1925, *43*, 132.	*J. Soc Chem. Ind.* 1925, *44*, 644B.
Use of hydrogen cyanide for the destruction of the white fly in tomato-houses.	E. R. Speyer . O. Owen.	*Nature* 1925, *116*, 644 .	*Chem. Zentr.* 1926, *97*, i, 1021.
Four fatalities at Trieste during fumigation of a ship with hydrogen cyanide (despite gas masks).	....	*Chem Age.* 1925, *13*, 474.	
Increasing use of hydrogen cyanide as a fumigant for ships.	....	*Ind. Eng. Chem.* (News) 1925, *3*, (19) 7.	
Suggested addition of lachrymator to hydrogen cyanide to safeguard fumigation workers.	....	*Ind. Eng. Chem.* 1925, *17*, 1,000.	
Utilisation of hydrogen cyanide for the destruction of pear tree pests.	R. L. Webster .	*New York Agric. Exptl. Station Bull.* 523, 1924.	*Chem. Zentr.* 1926, *96*, II, 979.
Comparison of hydrogen cyanide with other agents for disinfection of living spaces. (Costs, etc).	...	*Lancet.* 1925, *5324*, 580.	
Analytical data on hydrogen cyanide content of foods after fumigation.	P. Buttenberg . W Deckert. G. Gartz.	*Z. Nahr. Genussm* 1925, *50*, 92.	*Chem. Abstrs.* 1926, *20*, 244. *Chem. Zentr.* 1926, *97*, i, 523.
Practical observations on disinfection by hydrogen cyanide.	S. Paoli . .	*Annali d'Igiene* 1925, *35*, 872.	*Chem. Zentr.* 1926, *97*, i, 1598.
Destruction of cockroaches and their eggs by hydrogen cyanide.	C. E. Rice . .	*U. S. Pub. Hlth. Repts.* 1925, *40*, 1808.	*Chem. Abstrs.* 1925, *19*, 3336. *Brit. Chem. Abstrs.* 1925, *B*, 30.

APPENDIX I—*concld.*

Recent References in the Scientific Literature to the use of Hydrogen Cyanide as a Fumigant—concld.

Precis	Author	Original	Abstract
Destruction of vermin by hydrogen cyanide maximum effective concentration.	R. Newstead A E. Evans. W. H. Potts.	*Ann. Trop. Med. & Parasitol.* 1925, *19*, 91.	*Chem. Abstrs.* 1925, *19*, 3336.
Concentrations of hydrogen cyanide dangerous to man met with in fumigation 1/5000.	W. G. Liston .	*J. Soc. Chem. Ind.* 1925, *44*, 367.	*J. Ind. Hyg.* 1925, *7*, 197A.
Effect of fumigating cold storage with hydrogen cyanide.	P. Buttenberg . W. Deckert. Gahratz.	*Z. Untes. Nahr. Genussm.* 1925, *50*, 92-103.	*J. Soc. Chem. Ind.* 1925, *44*, B, 969.
Use of hydrogen cyanide for fumigation purposes in conjunction with a lachrymator, so as to give warning of the presence of HCN.	....	*Chem. and Met. Eng.* 1921, *25*, 1155.	
Preparation for destroying insects on trees by mixing gaseous hydrogen cyanide with an irritant such as mustard gas.	J. D. Neuls . .	*U. S. P.* 1381, 586, June 14, 1921.	*J. Soc. Chem. Ind.* 1921, *40*, 600A. *Chem. Abstrs.* 1921, *15*, 3537.
Hydrogen cyanide is more effective for extermination of insects in buildings if oxygen content of air is diminished by burning charcoal.	C. Schierholz .	*Oesterr-Chem-Zeit* 1921, *24*, 166.	*Chem. Abstrs.* 1922, *16*, 1115.
Bactericidal action of mixtures of hydrogen cyanide with hydrogen sulphide, chloroform, sulphur dioxide, Cyklon and formaldehyde. Latter mixture was only one which was more effective than hydrogen cyanide alone.	W. Nagel . .	*Desinfektion* 1921, *6*, 349.	*Chem. Zentr.* 1922, *93*, II, 171.
Probable replacement of gaseous hydrogen cyanide by the easily detected cyanogen chloride for fumigation of ships	...	....	*Chem. and Met. Eng.* 1922, *27*, 39.

APPENDIX II.

A. Results of Analyses of Cyanides.

Sample	Substances present	Percentage Composition					
		Volumetric determination. (Liebig's method) *	Gravimetric determination (Murry's method) †			Volumetric determination (Treadwell and Hall's method) ‡	
			1	2	3	1	2
Sodium cyanide A	Sodium cyanide	91·1	92·3	89·8	89·6	91·2	91·2
	Sodium chloride	..	4·1	3·5	3·5	4·8	2·9
Sodium cyanide B	Sodium cyanide	88·6	90·2	..	87·9	86·5	87·7
	Sodium chloride	..	4·4	..	3·7	4·9	4·9
Potassium cyanide A	Potassium cyanide	96·5	96·9	95·8	95·0	95·1	95 1
	Potassium chloride	..	2·1	3·5	4·6	6·3	3·8
Potassium cyanide B	Potassium cyanide	93·5	95·1	..	83 0	95·1	95·1
	Potassium chloride	..	3·5	..	2·8	1·6	3·8

* Ann. Chem. Pharm. (77) 102 ; or Treadwell and Hall, " Quantitative Analysis ", 1924, 606.
† Murry, " Standards and Tests for Reagent Chemicals," 1920, 319.
‡ Treadwell and Hall, " Quantitative Analysis ", 1924, 607.

APPENDIX II—*contd.*

B. Results of Analyses of Synthetic Mixtures of Cyanides and Chlorides.

Synthetic mixture		Percentage Composition				
		Actual	Volumetric estimation (Treadwell and Hall's* method)		Gravimetric estimation (Murry's method)†	
			(1)	(2)	(1)	(2)
1.	Sodium cyanide A	60	54·7	54·7	53·8	53·8
	Sodium chloride	40	41·7	42 9	42·1	42·1
2.	Sodium cyanide B	60	53·1	52·6	..	52·7
	Sodium chloride	40	42·9	42·9	..	42·2
3.	Potassium cyanide A	60	57·0	57·0	57·4	57·0
	Potassium chloride	40	43·8	42·3	42·1	42·7
4.	Potassium cyanide B	60	57·0	57·0	..	57·4
	Potassium chloride	40	40·8	42·3	..	41·7

* Treadwell and Hall, " Quantitative Analysis ", 1924, 607.
† Murry, " Standards and Tests for Reagent Chemicals ", 1920, 319.

APPENDIX II—*contd.*

C. Results of Estimations of HCN generated from various Cyanides and Mixtures in the Small-Scale Fumigation Apparatus.

Date	Sample	Charge	Volume displaced c.c.	Standard silver nitrate solution required c c.	HCN-Concentration: Parts per 100,000	HCN-Concentration: Percentage of theoretical value
22nd August 1925	Sodium cyanide A	Sodium cyanide . 0·10 gram	1,250	25·5	306	71
20th October 1925	Ditto	Sodium cyanide . 0·06 ,, Sodium chloride . 0·04 ,,	500	6·0	180	70
20th October 1925	Ditto	Sodium cyanide . 0·06 ,, Sodium chloride . 0·04 ,,	500	6·0	180	70
12th October 1925	Sodium cyanide B	Sodium cyanide . 0·10 ,,	1,000	19·0	285	67
19th October 1925	Ditto	Sodium cyanide . 0·06 ,, Sodium chloride . 0·04 ,,	500	6·0	180	70
19th October 1925	Ditto	Sodium cyanide . 0·06 ,, Sodium chloride . 0·04 ,,	500	5·8	175	68

APPENDIX II—*contd.*

C. Results of Estimations of HCN generated from various Cyanides and Mixtures in the Small-Scale Fumigation Apparatus—contd.

Date	Sample	Charge	Volume displaced c.c.	Standard silver nitrate solution required c.c.	HCN-Concentration	
					Parts per 100,000	Percentage of theoretical value
21st August 1925 . .	Potassium cyanide A	Potassium cyanide . 0·20 gram	1,250	41·3	496	77
19th October 1925 .	Ditto .	Potassium cyanide . 0·06 ,, Potassium chloride . 0·04 ,,	500	4·9	148	75
19th October 1925 .	Ditto .	Potassium cyanide . 0·06 ,, Potassium chloride . 0·04 ,,	500	5·0	150	77
13th October 1925	Potassium cyanide B	Potassium cyanide . 0·10 ,,	500	8·6	258	79
19th October 1925	Ditto .	Potassium cyanide . 0·06 ,, Potassium chloride . 0·04 ,,	500	5·1	153	79
19th October 1925 .	Ditto .	Potassium cyanide . 0·06 ,, Potassium chloride . 0·04 ,,	500	5·1	153	79.

APPENDIX III.

TABLE I.

Results of Tests to determine the Effects of Hydrocyanic Acid Gas on the Boll Weevil. Tallulah, La., October-November 1924, by G. L. Smith.

Date	Test Number	Time			Concentration of HCN Gas	Temperature °F.		Number of Weevils			Per cent. Weevils		Condition Temperature at starting
		Started	Opened	Hours Exposure		Max.	Min.	Used	Dead	Alive	Dead	Alive	
Oct. 15 .	1	11-54 a.m.	1-54 p.m.	2	1,500 to 100,000	..	..	26	26	0	100	..	Rising.
" 15 .	2	2-45 p m.	4-45 p.m.	2	1,500 " 100,000	88	78	22	22	0	100	..	Lowering.
" 16 .	3	9-15 a m.	11-15 a.m.	2	1,500 " 100,000	86	56	25	25	0	100	..	Rising.
" 16 .	4	11-30 a.m.	1-30 p m.	2	1,500 " 100,000	90	71	25	25	0	100	..	"
" 16 .	5	1-45 a m.	3-45 p.m.	2	1,500 " 100,000	99	73	25	25	0	100	..	Lowering.
" 16 .	6	3-55 p m.	5-55 p.m.	2	1,500 " 100,000	99	73	25	25	0	100	.	"
" 17 .	7	10-15 a m.	12-15 p.m.	2	1,500 " 100,000	86	72	25	25	0	100	..	Rising.
" 17 .	8	1-35 p.m	3-35 p.m.	2	1,500 " 100,000	97	84	25	25	0	100	..	Lowering.
" 17 .	9	3-55 p m.	5-55 p.m.	2	750 " 100,000	92	73	25	25	0	100	..	"
" 18 .	10	8-05 a m.	10-05 a.m.	2	750 " 100,000	75	55	25	25	0	100	..	Rising.
" 18 .	11	10-15 a.m.	12-15 a.m.	2	750 " 100,000	89	72	25	25	0	100	..	"
" 18 .	12	1-30 p m.	3-30 p m.	2	750 " 100,000	..	..	25	25	0	100	..	"
" 29 .	26	8-15 a.m.	10-15 a m.	2	750 " 100,000	78	50	25	25	0	100	..	"
" 20 .	13	11-00 a.m.	1-00 p.m.	2	375 " 100,000	95	80	25	25	0	100	..	"
" 20 .	14	1-10 p.m.	3-10 p m.	2	375 " 100,000	97	90	25	25	0	100	..	Lowering.
" 20 .	15	3-15 p.m.	5-15 p.m	2	375 " 100,000	85	80	25	25	0	100	..	"
" 24 .	21	3-15 p.m.	5-15 p.m.	2	375 " 100,000	85	65	25	18	7	72	28	"
" 27 .	22	4-00 p m.	6-00 p.m.	2	375 " 100,000	73	60	25	17	8	68	32	"
" 28 .	23	8-45 a.m.	10-45 a.m.	2	375 " 100,000	63	40	25	0	25	..	100	Rising.

APPENDIX III—*contd.*

TABLE I—*contd.*

Results of Tests to determine the Effects of Hydrocyanic Acid Gas on the Boll Weevil. Tallulah, La., October-November 1924, by G. L. Smith—contd.

Date	Test Number	Time			Concentration of HCN Gas	Temperature °F.		Number of Weevils			Per cent. Weevils		Condition Temperature at starting
		Started	Opened	Hours Exposure		Max.	Min	Used	Dead	Alive	Dead	Alive	
Oct. 28	24	1-20 p.m.	3-20 p m	2	375 to 100,000	84	76	25	23	2	92	8	Lowering.
,, 29	27	1-30 p.m.	3-30 p.m.	2	375 ,, 100,000	97	70	25	25	0	100	..	,,
,, 31	29	11-00 a.m.	1-00 p.m.	2	300 ,, 100,000	70—72	60—63	25	25	0	100	..	Rising.
,, 31	30	1-15 p.m.	3-15 p.m.	2	300 ,, 100,000	72—74	63	25	22	3	88	12	
Nov. 1	31	4-15 p.m.	4-15 p.m.	24	300 ,, 100,000	71—88	..	25	25	0	100	0	Lowering.
,, 21	16	1-40 p.m.	3-40 p.m.	2	150 ,, 100,000	90	80	25	21	4	84	16	,,
,, 21	17	3-40 p.m.	9-40 p m.	6	150 ,, 100,000	85	55	25	22	3	88	12	,,
,, 22	18	9-00 a.m.	3-00 p m.	6	150 ,, 100,000	82	50	25	10	15	40	60	Rising.
,, 22	19	3-00 p.m.	3-00 p.m.	24	150 ,, 100,000	83	36	25	8	17	32	68	Lowering.
,, 23	20	3-10 p.m.	3-10 p.m.	24	150 ,, 100,000	85	29	25	10	15	40	60	,,
,, 30	28	10-00 a.m.	10-00 a.m.	24	150 ,, 100,000	95	45	25	16	9	64	36	Rising.
,, 4	32	9-00 a.m	9-00 a.m.	24	300 ,, 100,000	88	48	25	25	0	100	..	
,, 5	33	9-00 a.m.	11-00 a.m.	2	450 ,, 100,000	85	..	25	19	6	76	24	
,, 5	34	11-10 a.m.	1-10 p.m.	2	450 ,, 100,000	90	..	25	25	0	100	..	
,, 5	35	1-15 p.m.	3-15 p.m.	2	450 ,, 100,000	91	..	25	24	1	96	4	
,, 8	38	1-30 p.m.	7-30 p.m.	6	450 ,, 100,000	80	..	25	25	0	100	..	
,, 10	39	10-00 a.m.	4-00 p.m.	6	450 ,, 100,000	84	..	25	25	0	100	..	
,, 5	36	3-20 p.m.	3-20 p.m.	24	450 ,, 100,000	91	56	25	25	0	100	..	
,, 6	37	3-30 p.m.	3-30 p.m.	24	450 ,, 100,000	93	54	25	25	0	100	..	

APPENDIX III—*contd.*

TABLE II.

Results of Tests to determine the effects of Hydrocyanic Acid Gas on the Boll Weevil, by F. H. Tucker and V. V. Williams.

Date (1925).	Test Number	Time			Concentration HCN gas in volumes	Temperature °F.		Number of Weevils			Per cent. Weevils		Type of Weevils		Type of Treatment
		Started	Opened	Exposure Hours		Max	Min	Used	Dead	Alive	Dead	Alive	Hibernated in Spanish Moss	Field Collected	
Nov. 12 .	1	1-40 p.m	5-40 p m.	4	374 to 100,000	71	71	30	30	.	100			30	Desiccator.
,, 12 .	2	8-30 p m	8-30 a m	12	450 ,, 100.000	68	.	30	30		100			30	Box.
,, 13 .	3	9-25 p.m	11-25 a m	2	450 ,, 100.000	69	..	30	30		100		..	30	,,
,, 13 .	4	10-27 a m	2-27 p m	4	230 ,, 100,000	73	70	30	12	18	40	60		30	Desiccator.
,, 13 .	5	11-53 a m.	1-53 p m.	2	450 ,, 100.000	86		30	30	.	100		.	30	Box.
,, 13 .	6	2-15 p m	4-15 p m	2	450 ,, 100,000	85		30	30	.	100	.		30	,,
,, 13 .	7	3-51 p m	6-51 p m	3	173 ,, 100,000	70	68	30	14	16	47	53		30	Desiccator.
,, 13 .	8	4-32 p m	6-32 p m	2	300 ,, 100.000	75		30	3		100		..	30	Box.
,, 14 .	9	8-52 a m	10-52 a m.	2	300 ,, 100 000	72		30	29	1	97	3		30	,,
,, 14 .	10	10-32 a m.	1-32 p m.	3	403 ,, 100 000	75	73	30	20	0	67	33	..	30	Desiccator.
,, 14 .	11	11-19 a m	1-19 p m.	2	300 ,, 100,000	82	.	30	30		100	.	.	30	Box.
,, 14 .	12	1-39 p m	2-39 p m	1	300 ,, 100,000	81		30	30	.	100	.	.	30	,,
,, 14 .	13	3-02 p m	4-02 p m.	1	300 ,, 100,000	85		30	30		100		.	30	,,
,, 14 .	14	4-26 p.m	5-26 p m.	1	300 ,, 100,000	77		30	29	1	97	3		30	,,
,, 16 .	15	9 50 a m	12-50 p m.	3	240 ,, 100.000	72	68	30	8	22	27	73	.	30	Desiccator.
,, 16 .	16	10-21 a.m.	11-21 a m.	1	375 ,, 100,000	78	.	30	8	22	27	73	.	30	Box.
,, 16 .	17	11-40 a m	12-40 p m.	1	375 ,, 100,000	70	.	30	25	5	83	17	.	30	,,
,, 16 .	18	1-55 p.m.	3-55 p.m.	2	375 ,, 100,000	70	.	30	29	1	97	3	..	30	,,
,, 16 .	19	2-05 p.m.	5-05 p m.	3	288 ,, 100,000	70	69	30	26	4	87	13	..	30	Desiccator.

APPENDIX III—*contd.*

TABLE II—*contd.*

***Results of Tests to determine the effects of Hydrocyanic Acid Gas on the Boll Weevil by F. H. Tucker and V. V. Williams*—contd.**

Date (1925).	Test Number	Time			Concentration HCN gas by volumes	Temperature °F.		Number of Weevils			Per cent. Weevils		Type of Weevils		Type of Treatment
		Started	Opened	Exposure Hours		Max	Min	Used	Dead	Alive	Dead	Alive	Hibernated in Spanish Moss	Field Collected	
Nov. 16 .	20	4-14 p m.	6-14 p m.	2	375 to 100 000	70	.	30	30	.	100	.	..	30	Box.
,, 17 .	21	10-11 a m.	2-11 p m.	4	192 ,, 100 000	68	61	30	27	3	90	10	.	30	Desiccator.
,, 18 .	22	1-02 p.m	5-02 p m.	4	230 ,, 100,000	68	66	30	30	..	100	.	.	30	,,
,, 19 .	23	10-47 a m.	2-47 p m.	4	211 ,, 100.000	66	65	30	29	1	97	3	.	30	,,
,, 20 .	24	11-30 a.m.	4-30 p.m.	5	269 ,, 100,000	72	66	30	23	7	77	23	.	30	,,
,, 21 .	25	10-55 a.m.	3-55 p.m.	5	211 , 100,000	70	66	30	23	7	77	23	.	30	,,
,, 23 .	26	2-30 p m.	7-30 p.m.	5	230 ,, 100 000	63	61	30	18	12	60	40	.	30	,,
,, 24 .	27	10-43 a.m	3-43 p.m.	5	192 ,, 100,000	72	69	30	30	..	100	..	30	..	,,
,, 25 .	28	9-45 a m.	3-45 p m.	6	192 ,, 100,000	73	63	30	30	..	100	.	30	.	,,
,, 28 .	30	11-50 a m.	4-50 p m.	5	192 ,, 100,000	66	62	30	30	.	100	.	30	..	,,
,, 30 .	31	9-43 a.m.	1-43 p.m.	4	259 ,, 100,000	72	60	30	30	..	100	..	30	..	,,
,, 30 .	32	2-28 p.m.	7-28 p m.	5	269 ,, 100,000	72	70	30	30	.	100	..	30	..	,,
Dec. 1 .	33	9-29 a.m.	1-41 p m.	4·2	297 ,, 100,000	70	58	30	30	..	100	..	30	..	,,
,, 2 .	34	9-40 a.m.	1-40 p m.	4	280 ,, 100.000	72	68	30	30	..	100	..	30	..	,,
,, 3 .	35	9-32 a.m.	1-44 p.m.	4·2	430 ,, 100,000	77	72	30	30	..	100	..	30	..	,,
,, 4 .	36	8-52 a.m.	12-52 p.m.	4	279 ,, 100,000	70	68	30	30	..	100	..	30	..	,,
,, 4 .	37	1-40 p.m.	5-40 p m.	4	279 ,, 100,000	71	65	30	30	..	100	..	30	..	,,
,, 5 .	38	9-10 a.m.	1-10 p.m.	4	298 ,, 100,000	69	63	30	30	..	100	..	30	..	,,

APPENDIX III—*concld.*

TABLE III.

Desiccator Tests to determine the effect of Hydrocyanic Acid Gas on Field Collected Boll Weevil.

Date 1925	Test Number	Time		Hours Exposure	Concentration HCN gas volume in 100,000 volumes	Temperature °F.		Number of Weevils			Per cent. Weevils		Remarks
		Release	Remove			Max	Min.	Used	Dead	Alive	Dead	Alive	
Sept. 8 .	1	11-30 a.m	4-30 p m	5	259	90	86	30	30	..	100	..	
„ 9 .	2	9-30 a.m.	11-30 p m.	5	326	87	82	30	30	..	100	..	Temperature increased.
„ 9 .	3	2-15 p.m	7-15 p m	5	336	90	86	30	30	..	100	..	
„ 9 .	4	8-15 p.m.	18-15 a m	12	317	90	77	30	30	..	100	..	Temperature decreased.
„ 10 .	5	9-30 a.m.	1-30 a m	4	307	81	77	30	30	..	100	..	
„ 10 .	6	2-45 p.m.	5-45 p.m	3	355	86	84	30	30	..	100	..	Temperature increased.
„ 15 .	7	11-00 a m.	2-00 p.m.	3	375	88	86	30	30	..	100	..	
„ 15 .	8	3-30 p.m	5-30 p.m.	2	326	90	90	30	30	..	100	..	Temperature constant.
„ 16 .	9	10-00 a.m.	11-00 p.m	3	Check	88	82	30	..	30	.	100	
„ 17 .	10	1-30 p m.	4-30 p m	3	Check	90	88	30	..	30	.	100	Temperature increased.
„ 22 .	11	9-30 a.m.	11-30 p m.	2	336	81	79	30	30	..	100	..	
„ 22 .	12	2-00 p.m.	3-00 p.m.	1	297	74	74	30	30	..	100	..	Temperature constant.
„ 22 .	13	3-45 p.m.	4-45 p.m	1	191	86	86	30	24	6	80	20	
„ 23 .	14	9-30 a.m.	10-30 a.m.	1	326	86	84	30	30	..	100	..	Temperature increased.
„ 23 .	15	9-15 a.m.	10-30 a.m	1¼	315	79	75	30	30	..	100	..	

APPENDIX IV.

Large-Scale Results of Fumigation with Hydrocyanic Acid Gas.

Table I.—*Typical Monsoon Results.*

Barge No.	Date	No. of bales	Charges of cyanide lb.	Total weight of cyanide lb.	No. of bales per lb. of cyanide	Maximum concentration during day (Parts per 100,000)	Minimum concentration during day (Parts per 100,000)	Overnight concentration (Parts per 100,000)	Concentration on the following day (Parts per 100,000)
23	19th Aug. 1926	368	20, 20, 20, 10	70	5·2	660	285	490	55
13	Ditto	273	20, 20	40	6·8	775	450	680	60
30	Ditto	244	60	60	4·1	1,250	920	920	75
8	20th Aug. 1926	286	20, 20, 20	60	4·7	650	300	575	55
24	Ditto	372	20, 20 20	60	6·2	670	330	560	90
31	21st Aug 1926	254	20, 20, 20	60	4·2	840	350	660	25
28	Ditto	223	20, 20	40	5·6	690	285	305	75
22	Ditto	359	20, 20, 30	70	5·1	935	245	845	45
13	22nd Aug. 1926	281	20, 20, 10	50	5·6	1,250	310	485	75
30	Ditto	256	20, 20, 20	60	4·3	1,225	325	524	25
23	Ditto	378	20, 20, 30	70	5·4	1,070	240	495	45
8	24th Aug. 1926	263	20, 20, 20, 10	70	3·8	945	225	655	115
24	Ditto	322	40, 20, 10	70	4·6	450	170	315	30
13	26th Aug. 1926	165	20, 20, 10	50	3·3	915	310	690	207
8	1st Sept. 1926	233	20, 20, 10	50	4·7	650	370	375	60
13	Ditto	214	50	50	4·3	1,030	Started late	940	160
24	2nd Sept. 1926	280	30, 30	60	4·7	645	455	430	85
30	Ditto	192	60	60	3·2	835	Started late	905	60
8	5th Sept. 1926	235	20, 20, 10	50	4·7	925	245	420	80
28	Ditto	157	20, 20	40	3·9	840	255	760	55
13	Ditto	267	20, 20, 10	50	5·3	845	340	590	70
31	6th Sept. 1926	252	60	60	4·2	690	Started late	765	85
30	7th Sept. 1926	211	20, 20. 10	50	4·2	950	255	601	75
22	Ditto	380	30, 30, 10	70	5·4	910	580	624	100
20	Ditto	333	60	60	5·5	1,153	Started late	1,021	96
8	8th Sept. 1926	243	20, 20. 10	50	4·9	836	415	585	124
13	Ditto	76	20, 10	30	2·5	973	283	579	100
13	17th Sept. 1926	216	20, 20, 10	50	4·3	743	249	375	90
8	18th Sept. 1926	184	20, 20	40	4·6	977	295	546	30

APPENDIX IV—*contd.*

LARGE-SCALE RESULTS OF FUMIGATION WITH HYDROCYANIC ACID GAS—*contd.*

TABLE II.—*Typical Post-Monsoon Results.*

Barge No.	Date	No. of bales	Charges of cyanide lb.	Total of cyanide lb.	No. of bales per lb. of cyanide	Maximum concentration during day (Parts per 100,000)	Minimum concentration during day (Parts per 100,000)	Overnight concentration (Parts per 100,000)	Concentration on the following morning (Parts per 100,000)
24	5th Nov. 1926	403	30, 20, 10	60	6·7	785	315	625	105
22	Ditto	413	30, 30	60	6·8	965	240	825	95
8	8th Nov. 1926	235	20, 10, 10	40	5·9	625	250	413	150
22	9th Nov. 1926	330	30, 20, 10	60	5·5	1,232	250	875	80
8	10th Nov. 1926	183	20, 10	30	6·1	970	320	420	115
13	Ditto	221	20, 10	30	7·4	965	395	500	90
28	Ditto	206	20, 20, 10	50	4·1	710	315	630	110
30	Ditto	250	20, 10, 10	40	6·2	605	215	500	50
24	11th Nov. 1926	297	20, 20, 10	50	5·9	760	345	620	90
31	Ditto	196	20, 10, 10	40	4·9	815	345	715	10
22	12th Nov. 1926	283	20, 10 16	46	6·1	870	270	505	75
23	Ditto	311	30, 20	50	6·2	1,325	270	500	60
8	Ditto	206	20, 20	40	5·1	935	315	520	80
13	13th Nov. 1926	224	20, 20	40	5·6	990	216	725	85
13	19th Nov. 1926	237	20, 20	40	5·9	878	318	612	95
22	Ditto	337	30, 20, 10	60	5·6	910	315	680	73
8	21st Nov 1926	194	20, 10, 10	40	4·8	642	215	504	60
30	23rd Nov. 1926	217	20, 10, 10	40	5·4	900	263	563	18
23	24th Nov. 1926	395	30, 20, 10	60	6·6	1,450	305	500	160
24	Ditto	390	30, 10, 10	50	7·8	650	320	510	80
13	25th Nov. 1926	82	10. 5. 5	20	4·1	710	265	505	75
23	28th Nov. 1926	403	30, 20, 10	60	6·7	725	240	620	50
8	29th Nov. 1926	214	40	40	5·3	1,505	..	1,215	225
30	30th Nov. 1926	214	20, 20, 10	50	4·3	1,250	165	1,250	175
22	Ditto	342	30, 20	50	6·8	800	280	425	115
24	Ditto	229	20, 20, 10	50	4·6	615	260	470	80
31	Ditto	217	20, 20	40	5·4	1,040	135	520	50
23	1st Dec. 1926	315	30, 20	50	6·3	985	305	450	50
20	Ditto	398	30, 20, 20	70	5·7	600	250	325	60

APPENDIX V.

GOVERNMENT OF INDIA.

Department of Education, Health and Lands.

Notification No. 1493-Agri., dated the 14th of November 1925 as amended up to the 26th of January 1927.

In exercise of the powers conferred by sub-section (1) of section 3 of the Destructive Insects and Pests Act, 1914 (II of 1914) hereinafter referred to as the said Act, the Governor-General in Council is pleased to issue the following order for the purpose of regulating the import into British India of American cotton :—

1. In this order :—

(i) "Cotton" includes all ginned cotton, whether baled or loose, but does not include cotton seed or unginned cotton.

(ii) "American cotton" means all cotton produced in any part of America.

2. On or after the 1st of December 1925, American cotton shall not be imported into British India by means of the letter or sample post and shall not be imported by any other means save through the port of Bombay * (between the first of November and the thirty-first of May in any year) and subject to the following conditions :—

† [(*a*) On or before the departure of a ship carrying a consignment of American cotton for Bombay from the port from which the cotton is consigned, the consignee shall ascertain the name of the ship, the probable date of its arrival in Bombay and the number of bales of American cotton contained in the consignment, and shall furnish this information to the Collector of Customs, Bombay, not less than three weeks before the arrival of the ship at Bombay, provided that where the cotton is loaded for Bombay at Port Said or at a European port the ordinary length of voyage from which is less than three weeks, it shall be sufficient to furnish the information not less than 10 days before the arrival of the ship.]

(*b*) On arrival at Bombay, the cotton shall be disinfected in such manner as shall be prescribed in rules made by the Government of Bombay under section 5 of the said Act ;

(*c*) prior to landing the cotton the importer shall pay or agree to pay a sum at a rate fixed by the Governor-General in Council sufficient to cover the cost of fumigation.

‡ [(*d*) no vessel shall discharge American cotton during a period of rain, mist or drizzle.]

* These words were deleted by S. 1 of Notification No. 932-Agri., dated the 19th of May 1926.
† This paragraph as it reads now was substituted by Notification No. 76-Agri., dated the 14th of January 1926.
‡ Added by S. 2 of Notification No. 932-Agri., dated the 19th of May 1926.

APPENDIX V—*contd.*

GOVERNMENT OF INDIA.

Department of Education, Health and Lands.

Notification No. 1561-Agri., dated the 26th of November 1925 as amended up to the 26th of January 1927.

In pursuance of clause (*c*) in para. 2 of the Notification of the Government of India, Department of Education, Health and Lands, No. 1493-A., dated the 14th November 1925, the Governor-General in Council is pleased to fix the rate at which the sum therein referred to is to be paid at (*e*) Rs. (3-1-0) per bale, or in cases in which the importer has failed to furnish information in accord with clause (*a*) in para. 2 of the said notification at (*e*) (Rs. 5-1-0) per bale. (*a*) [Provided that when cotton is landed at the special American cotton wharf in the Bombay docks the rate shall be (*e*) Rs. (3-12-0) per bale, or, in cases in which the importer has failed to furnish information in accordance with clause (*a*) of paragraph 2 of the said notification (*e*) Rs. (5-12-0) per bale.] This rate shall cover the cost of fumigation including the cost of loading the cotton into the barge, conveyance to the fumigation wharf or bunder, unloading from the barge after fumigation and delivery at the bunder, (*b*) [but not including Docks import charges as specified in the Bombay Port Trust Scale of Rates charged at the Docks.] Provided that the minimum fee for the fumigation of any consignment of cotton shall be Rupees one hundred and fifty.

(*c*) [2 (*a*)] In the case of samples of American cotton imported by parcel post, or as ship's parcels not exceeding 20 lbs. each in weight, the consignee shall pay a fee for fumigation of Rupees two for each parcel.

(*d*) [(*b*) In the case of sample bales of American cotton not exceeding six in number in any one consignment imported for testing purposes, the consignee shall pay a fee for fumigation of Rs. 10 for each bale.]

(*a*) Introduced by Notification No 993-Agri., dated the 19th of May 1926
(*b*) Inserted by Notification No. 144-Agri , dated the 26th of January 1926
(*c*) Renumbered by Notification No 2184-Agri., dated the 25th of November 1926.
(*d*) Introduced by Notification No. 2184-Agri., dated the 25th of November 1926.
(*e*) As amended by Notification No. 154-Agri., dated the 26th of January 1927.

APPENDIX V—*concld.*

Government of Bombay.

Notification.

Bombay Castle, 26th November 1925.

No. 4388-24.—In exercise of the powers conferred by Section 5 of the Destructive Insects and Pests Act, 1914 (II of 1914), the Government of Bombay (Transferred Departments) is pleased to make the following rules for the detention and disinfection of American cotton, the fumigation of which is required by the notification of the Government of India in the Department of Education, Health and Lands, No. 1493-Agr., dated the 14th November 1925, and of cotton which has been in contact or proximity thereto and for regulating the powers and duties of the fumigation authority, namely :—

(1) These rules may be called the Fumigation of American Cotton Rules, 1925. They will come into force from 1st December 1925.

(2) Except as provided in Rule 5, no American cotton or any other cotton the fumigation of which is required by the notification of the Government of India in the Department of Education, Health and Lands, No. 1493-Agr., dated 14th November 1925, hereinafter called the said notification, or any other cotton which may have been in contact or proximity thereto shall be landed without fumigation * (except at any special landing place provided by the Trustees of the Port of Bombay and approved by the fumigation authority for the reception of unfumigated American cotton). Such cotton shall, on arrival at Bombay, be fumigated with hydrocyanic acid gas. Fumigation shall be carried out by the Trustees of the Port of Bombay on behalf of Government. Such cotton shall be taken overside from the vessel into barges provided by the fumigation authority and shall be conveyed to the fumigation wharf or bunder in such barges, delivery being given at the fumigation wharf or bunder only, after fumigation. The rate of discharge of cotton from vessels shall be so regulated as not to exceed the capacity of the barges provided for the purpose.

(3) Cotton other than American cotton which is imported into British India in a vessel carrying American cotton and loaded in the same hatch as any bale or bales of American cotton shall be deemed to have been in contact or in proximity thereto and shall be subject to the restrictions and conditions specified in the said notification.

(4) For the purposes of these rules the fumigation authority shall be the Collector of Customs, Bombay, or such officer as he may appoint.

(5) Samples of American cotton imported by parcel post, or as ships parcels not exceeding 20 lbs. each in weight, shall be fumigated on arrival with hydrocyanic acid gas, or such other fumigant as may be approved by the Governor-General in Council, at the Customs House.

(6) All cotton the fumigation of which is required by the said notification or under these rules shall be at the sole risk of the importer during landing, transhipment and fumigation and no liability for loss or damage due to fumigation shall attach to Government or its agents.

(7) Any breach of these rules shall be punishable with a fine which may extend to Rs. 1,000.

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* Added by Notification of the Government of Bombay, dated the 25th May 1926.

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SOHAN SINGH BINDRA M.Sc.
Assistant Cotton Entomologist Agricultural College, Lyallpur

AGRICULTURAL RESEARCH INSTITUTE, PUSA

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PREFACE

The present investigation was undertaken at the Entomological Laboratory, Punjab Agricultural College, Lyallpur, and was conducted during the tenure of a research studentship (16th September 1923 to 3rd May 1926) awarded by the Indian Central Cotton Committee, Bombay. The cost of cotton bolls, menial labour, apparatus, etc., was borne by the Department of Agriculture, Punjab.

The investigation was carried out under the guidance of Mr. M. Afzal Husain, Entomologist to Government, Punjab, to whom I offer my sincere thanks for constant help and assistance in writing this paper. I must also express my gratitude to the Punjab Department of Agriculture for all the help given and facilities afforded to me in the conduct of my investigation.

SOHAN SINGH BINDRA

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ILLUSTRATIONS.

STUDIES OF *PLATYEDRA GOSSYPIELLA*, SAUNDERS, (PINK-BOLLWORM) IN THE PUNJAB.

PART I

BY

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Introduction.

The first authenticated record of the occurrence of *Platyedra gossypiella*, Saund., in the Punjab dates back to the year 1894, when two specimens were sent by the Director of Land Records and Agriculture, Punjab, to Merton, with the note—'Cotton boll moths reared from caterpillars from Lahore.' These specimens were identified as *Gelechia gossypiella*, Saund.[1]

In 1905 the ravages of the bollworms were responsible for a complete failure of cotton crop in the Central and South-western Punjab [2], and Lefroy, the then Imperial Entomologist, was deputed to investigate the problem. He arrived at the conclusion that the pests responsible for the disaster were Spotted Bollworms (caterpillars of *Earias insulana*, Poisd., and *Earias fabia*, Stoll.) and that the Pink-Bollworm (a caterpillar of *Platyedra gossypiella*, Saund.) occurred only in very small numbers and did not contribute to the losses.[3] The result of this report was that, while investigations were started on Spotted Bollworms, no attention was paid to the study of Pink-Bollworm.

In 1917 Bainbrigge Fletcher[4] drew attention to the fact that *Gelechia gossypiella*, Saund., occurs throughout the plains of India, Burma and Ceylon as a pest of cotton, serious in many localities, especially so in the United Provinces, Punjab and North-west Frontier Province. In 1922 it was discovered by the Entomological Section, Punjab, that cottons in Sialkot and Ferozepore districts were badly attacked by *Platyedra gossypiella*, Saund.[5]

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[1] Durrant, J. H Notes on Tincina bred from cotton bolls. *Bull. Ent., Res*, *Vol. III*, London, 1912, p. 205.

[2] Renouf, W. Note on the cotton failure on accou t of Bollworm ravages in the Central and South-west Punjab in 1905, and on the results of measures taken to prevent recurrence in 1906. *Bull. No 1, Dept. Agri. Punjab*, Lahore, 1907, p. 1.

[3] Lefroy, H. M. An Outbreak of cotton pests in the Punjab, 1905. *Bull. No. 2, Agri. Res. Inst., Pusa*, 1909, p. 3.

[4] *Rept. Proc. Ent. Meet*, *Pusa, 1917*, p. 111.

[5] *Rept. Dept. Agri., Punjab*, for the year ending June 1923, Part II, Vol II, Lahore, 1924, p. 181.

On the appointment (in 1923) of the present writer as the Indian Central Cotton Committee Scholar, detailed investigations on *Platyedra gossypiella*, Saund., were started in the Punjab. So far the work has been done along the following lines :—

(1) Status and distribution of *P. gossypiella*, Saund., in the Punjab.
(2) Seasonal history of *P. gossypiella*, Saund., during the cotton season in South-eastern Punjab.
(3) Resting stage of 'long-cycle' larvae and emergence of 'long-cycle' moths of *P. gossypiella*, Saund.

Material.

The material required for the investigation of the status and distribution of Pink-Bollworm in the Punjab was procured through the District Agricultural Assistants and Tahsildars and consisted of :—(1) Green bolls (*kharif* 1924), (2) *Kapas* (*kharif* 1923 and 1924) and (3) Cotton seeds (*kharif* 1923 and 1924). Samples of green bolls were procured from about one hundred different localities scattered all over the province, and in all about thirty-six thousand bolls were examined. Samples of *kapas* (seed-cotton) were obtained from about 250 different localities, and in all a quantity of about ten maunds of *kapas* was examined. Samples of ginned seeds were received from some of the important *mandies* and a number of ginning factories from all over the Punjab, and the quantity of seed examined was over one maund.

For the investigation of the seasonal history of Pink-Bollworm in the South-eastern Punjab, sixty-two localities were selected in the five districts, namely, Gurgaon, Rohtak, Hissar, Karnal and Ferozepore, and a fortnightly supply of 100 green bolls was procured throughout the two succeeding cotton seasons, *i.e.*, August to December 1924 and 1925. The instructions given to the collectors were :—

(1) that bolls should be collected from the same, or, at the most, neighbouring fields ;
(2) that the collection should be made from as many different plants as possible, without paying any regard to the size of the bolls or to the fact whether the bolls were attacked or not.

On the whole, these instructions were properly carried out, except that very small bolls (bolls up to five days old) were wanting in the samples received. In all about fifty thousand bolls were examined, and during the busiest season five hundred bolls had to be examined daily.

The material for the investigation concerning the resting stage of 'long-cycle' caterpillars and emergence of 'long-cycle' moths of *P. gossypiella*, Saund. consisted of :—(1) about one thousand samples of *kapas*, each weighing about one lb. collected from different localities in the South-eastern Punjab, and (2) a weekly supply of about 250 green bolls received from September to December from about twenty stations in the South-eastern Punjab.

Variation in samples.

Before examining the figures tabulated and drawing inferences, it is advisable to ascertain the correctness of the samples examined. This was ascertained only in the case of green bolls, and to accomplish this, it was arranged to get material collected by a trained Entomological Assistant. One thousand bolls were collected in December : 600 from Ballabgarh (District Rohtak) and 400 from Ambala. The bolls were examined in batches of 50 each and the attack of Pink-Bollworm was ascertained. It was noticed that, in all the 20 batches of 50 bolls each, the deviation in attack was not more than 16 per cent. above and 12 per cent. below the average attack (Table No. I, column 7).

The results, arrived at from the examination of 20 lots of 50 bolls each, were then condensed into 10 batches of 100 bolls each, and in each batch the deviation in attack was ascertained. It was then seen that, when the lots of 100 bolls each were taken into consideration, the fluctuations in the range of attack were not so great, being only 12 per cent. above and 9 per cent. below the normal attack. It is thus evident that variation in the percentage of attack in samples of 100 bolls was $\frac{3}{4}$th of the variation in samples of 50 bolls. The accuracy is bound to be greater in samples larger than 100 bolls, but it is regretted that it has not been possible to ascertain this. According to Dr. Gough [1], however, the percentage of attacked bolls in any sample of 100 bolls taken at random may vary, from the average for the field or district, to the extent of ten above and twelve below. It is thus safe to conclude that variation in attack in any sample of 100 green bolls cannot be more than 12 per cent. above or below the average attack.

I. Status and distribution of *P. gossypiella*, Saund., in the Punjab.

The examination of green bolls of cotton, *kapas* and ginned cotton-seeds, carried out during the two successive seasons (1923 and 1924), has conclusively shown that the status of *P. gossypiella*, Saund., as a pest of cotton, varies in different parts of the province.

With the highest intensity in that part of the Punjab which adjoins the United Provinces, the attack continues with decreasing severity along the foot of the mountains and towards the central districts, and is at its lowest in the Canal colonies and the dry area further west. Thus, on the basis of the intensity of attack of this insect on cottons, the Punjab may be divided into five regions or zones. It is interesting to note that this division, based on the prevalence of Pink-Bollworm, agrees fairly closely with a division based on the meteorological data, such as temperature and rainfall. The details of the Entomological data are given in Tables Nos. II, III and IV, and in what follows an attempt is made to correlate them with climatic factors.

[1] Gough, L. H. The rate of increase of the Pink-Bollworm in green bolls in the period July to November, 1916. *Min. Agri. Egypt, Tech. and Sci. Serv. Bull. No. 13*, Cairo, p. 9.

Regional distribution of Pink-Bollworm.

(1) *The South-eastern zone* includes the Districts of Gurgaon, Rohtak, Karnal, Hissar, Ferozepore, Ludhiana and Jullundhar. On the east, this region is adjacent to Saharanpur and Muzaffarnagar Districts of the United Provinces, and to the west and south of it, is the sandy tract of Rajputana.

The rainfall during August and September—the period during which the first appreciable attack of Pink-Bollworm begins—is about 5 inches, and the normal maximum shade temperature during these months is 95·4°F. There are about 4½ lakh acres under cotton every year, *i.e.*, about 21 acres per square mile. It is an important cotton growing tract for the Indian varieties, the American varieties being practically absent except in the Ferozepore District. This region shows the highest attack of *P. gossypiella*, Saund.,—the maximum attack on green bolls reaches 67·7 per cent. and the average number of Pink-Bollworms found per 100 *tolas* of *kapas* of mixed pickings is 299. The percentage of seed damaged by Bollworms (especially the Pink-Bollworm) is 13·8, and the number of Pink-Bollworms calculated per 10,000 ginned seeds is 45.

(2) *The Eastern zone* includes the Districts of Ambala, Hoshiarpur, Kangra, Gurdaspur, Amritsar and Sialkot. (Simla District, which also lies in this region, is hilly and no cotton is grown there.) This region consists of mountainous and sub-montanous tracts and plains adjacent to these tracts. During August and September the rainfall is about 20 inches, and the normal maximum shade temperature during these months is 94·0°F. There are about 2¼ lakh acres under cotton every year, *i.e.*, about 12 acres per square mile. *Desi* cottons are chiefly cultivated, while American cottons are rarely seen. As regards the extent of damage, this region comes next to the South-eastern Punjab. The maximum attack on green bolls reaches 56·1 per cent. and the average number of Pink-Bollworms found per 100 *tolas* of *kapas* of mixed pickings is 175. The percentage of seed damaged by Bollworms (especially the Pink-Bollworm) is 5·4 and the number of Pink-Bollworms calculated per 10,000 ginned seeds is 32.

(3) *The Central zone* includes the Districts of Lahore, Gujranwala and Gujrat which occupy the central position in the province. During August and September the rainfall is about 8 inches, and the normal maximum shade temperature is 97·8°F. There are about 3¼ lakh acres under cotton every year, or on the average 43 acres per square mile. The maximum attack on green bolls reaches 41·9 per cent. and the average number of Pink-Bollworms found per 100 *tolas* of *kapas* of mixed pickings is 67. The percentage of seed damaged by Bollworms (especially the Pink-Bollworm) is 4·5, and the number of Pink-Bollworms calculated per 10,000 ginned seeds is 11.

(4) *The Northern zone* comprises the Districts of Jhelum, Rawalpindi and Campbellpore. Very little cotton is grown in this tract; about 40 thousand acres are put under cotton every year, *i.e.*, about 4 acres per square mile. American cottons are

still a rarity in this region. During August and September the rainfall is 12·6 inches, and the normal maximum shade temperature during these months is 93·7°F. The average number of Pink-Bollworms found per 100 *tolas* of *kapas* of mixed pickings is 32, the percentage of seed damaged by Bollworms is 2·5, and the number of Pink-Bollworms calculated per 10,000 ginned seeds is 7. The infestation is fairly uniform and slightly higher than that in the Western Punjab including the Colony areas.

(5) *The Western zone including the Colony areas* [1] comprises the Districts of Shahpur, Jhang, Lyallpur, Sheikhupura, Montgomery, Multan, Dera Ghazi Khan, Muzaffargarh and Mianwali. During August and September the rainfall is only 2·3 inches, and the normal maximum shade temperature is 99·6°F., the highest in the province. It is an important cotton growing tract of the province, and there are about 13 lakh acres under cotton every year, *i.e.*, about 32 acres per square mile. *Desi* and American cottons are cultivated in the ratio of about 1 to 2. The maximum attack on green bolls does not exceed 5 per cent., and the average number of Pink-Bollworms found per 100 *tolas* of *kapas* of mixed pickings is only 11. The percentage of seed damaged by Bollworms (especially the Spotted-Bollworm) is 2·5 and the number of Pink-Bollworms calculated per 10,000 ginned seeds is 4.

A summary of the attack of Pink-Bollworm on cottons and the meteorological condition in the different zones of the Punjab is given below :—

Region	August and September		Percentage of green bolls attacked	No of Pink-Bollworms found per 100 *tolas* of *kapas*	No of Pink-Bollworms found per 10,000 ginned seeds	Remarks.
	Rainfall in inches	Average maximum temperature F.				
South-eastern . . .	5	95	67·7	299	45	
Eastern	20	94	56·1	175	32	
Central	8	98	41·9	67	11	
Northern	12	94	..	32	7	Very little cotton is grown.
Western including the Colony areas.	2	100	4·6	11	4	

The facts brought forward go to prove that although Pink-Bollworm has had free access to the 'Western Punjab including the Colony areas,' and more cotton is grown in this area than in the rest of the Punjab, thus providing—in so far as the food supply is concerned—the most favourable conditions for the distribution and propagation of *P. gossypiella*, Saund., yet the insect has not been able to attain such a prominence in this region as to be called a 'pest'. On the other hand, it appears to flourish all along the submontane tract and has firmly established

[1] Lower Bari Doab Canal Colony, Lower Jhelum Canal Colony, and Lower Chenab Canal Colony excluding portions of Gujranwala and Sheikhupura Districts.

itself as a 'major pest' in the South-eastern Punjab. The temperature appears to be one of the chief controlling factors. It will be seen that all the Districts included in the zone 'Western Punjab including the Colony areas' lie south-west of the isothermal line of 102°F. This is the average maximum temperature during June to September, while the absolute maximum, to which the insect is subjected, reaches 120°F. in June and 115°F. in July. On the other hand, the average maximum temperature during June to September in the South-eastern and Eastern Punjab is 95°F. and the absolute maximum does not exceed 110°F. These are the temperatures in shade; the actual field temperatures are undoubtedly much higher. The fatal temperature for the resting larvae, as pointed out by Willcocks[1], is 50°C. (122°F.) to 55°C. (131°F.), which makes it evident that, just as in Southern Egypt, so in the Western Punjab including the Colony areas, the temperature in the fields during June and July will be too high for the caterpillars to survive, and therefore no moth will emerge during July and August.

It will not be out of place to mention that the excessive summer rainfall does not appear to exercise any check on Pink-Bollworm. It has been observed that even in a District like Kangra (Eastern Punjab), where the rainfall from June to September is above 50 inches, the pest flourishes, and as many as 192 Pink-Bollworms were found per 100 *tolas* of *kapas* of mixed pickings. (This figure is the average of 22 samples examined from 10 different localities in the District.)

II. Seasonal history of *P. gossypiella*, Saund., during cotton season in the South-eastern Punjab.

With a view to gain detailed information regarding the seasonal variation in the intensity of Bollworm attack in the South-eastern Punjab, an examination of green bolls was conducted during *kharif* 1924 and 1925. The results of this enquiry are presented in Table No. V. The data were collected separately for each of the twenty-three tahsils of the South-eastern Punjab and to get more uniform results, the records for different tahsils of a District have been combined and those for the different District put together to get results for the whole region. The figures of attack for the region, being based on fortnightly examinations of two to three thousand bolls, might be taken to represent a true condition of attack in the region as a whole.

Progress of Pink-Bollworm attack.

The progress of Pink-Bollworm attack has been recorded in four different ways:—(1) on bolls, (2) on loculi, (3) on seeds, and (4) the number of Pink-Bollworms found per 100 green bolls.

(1) *Attack on green bolls.* In Table No. V, column 4 shows the rate of increase of Pink-Bollworm during the season August to December. The study of these

[1] Willcocks, F. C. The insects and related pests of Egypt: Vol. I. The insect and related pests injurious to the cotton plant: Part I. The Pink Bollworm, 1916, Cairo, p. 162.

figures indicates that not more than 16 per cent. of the bolls were attacked by the end of September, but after the middle of October the progress of attack was very rapid until it reached its maximum (63 per cent.) towards the end of December.[1]

(2) *Attack on loculi of green bolls.* In Table No. V, column 7 gives the percentage of attack on the loculi in an average sample consisting of both the sound and attacked bolls. The study of these figures clearly indicates that attack on the loculi of green bolls followed the same general rule as was observed in the case of bolls, but the maximum attack did not exceed 42 per cent. It will not be out of place to mention that the number of loculi produced in an attacked boll is the same as that produced in a healthy boll, because the septa are formed at a very early stage. In Table No. V, column 5 gives the percentage of loculi damaged in the attacked bolls only, which will clearly indicate that the attack of Pink-Bollworm on green bolls is usually restricted to two loculi (59·4 to 68·9 per cent.), and the third loculus is invariably found to be sound. (Three is the normal number of loculi in a boll of *Desi* cotton.)

(3) *Attack on seeds in green bolls.* In Table No. V, column 8 gives the percentage of attack on the seeds in green bolls, and these figures show that there was a continuous rise of attack from August to December, as was noticed in the case of bolls and loculi though not to the same extent. Bolls in which all the seeds had been attacked were not uncommon, but usually not more than one-third (25·4 to 40·2 per cent.) of the seeds were lost, and the amount of absolute damage did not exceed 18·8 per cent.

The number of mature seeds produced in the sound bolls was invariably found to be higher than that produced in the attacked bolls, but the exact relationship between the number of those seeds produced in the attacked and that in the sound bolls is a problem for future investigation.

(4) *Number of Pink-Bollworms per 100 bolls.* In Table No. V, column 12 gives the number of Pink-Bollworms found per 100 bolls. It will be seen that in August a large number of attacked bolls had each a single caterpillar in it, later on multiple infestation was commonly observed, and towards the end of the season, each attacked boll had, on an average, two caterpillars in it. Further information on the subject is given below (Page 175).

Progress of Spotted Bollworm attack and its relation to that of Pink-Bollworm.

Since 1905, when Lefroy investigated the causes of the failure of cotton crop in the Punjab, it has been generally believed that the Spotted Bollworm predomin-

[1] It may be pointed out that in arriving at these conclusions the total population of bolls present on the plants at a particular time has not been taken into consideration but only the percentage of attack is taken as a point for consideration. For further discussion reference may be made to page 175 ? below.

ated the Pink-Bollworm throughout the Punjab, but the present investigation has clearly shown that, except during certain abnormal years, the Pink-Bollworm is by far the most serious pest in many parts of the province. In Table No. V, column 9 gives the percentage of bolls attacked by Spotted Bollworm. The study of these figures would clearly indicate that during *kharif* 1924 and 1925, Spotted Bollworm was a minor pest in the South-eastern Punjab, the attack never exceeding 4 per cent., while in the case of Pink-Bollworm the maximum was 63 per cent. It may be pointed out that certain bolls attacked by Pink-Bollworm were also found to be attacked by Spotted Bollworm, but the percentage of bolls subjected to a combined attack was very small throughout the season and never exceeded 2 per cent. of the bolls examined. It cannot, however, be denied that Spotted Bollworms are capable of causing greater damage than Pink-Bollworms, because of their larger size and consequently greater appetite, and it was actually noticed that a boll attacked by Pink-Bollworm usually showed fewer damaged seeds than one attacked by Spotted Bollworm.

The attack of Spotted Bollworm varied between 1·4 to 3·9 per cent. ; the main period of its activity being before the middle of September, or in other words just before the cotton picking began.

It was also possible to record the number of bolls showing traces of Bollworm attack but containing no caterpillars, and the percentage of such bolls in the total number of bolls examined is given in Table No. V, column 10. These figures show that the number of bolls showing signs of Bollworm attack rose gradually from the beginning of August to the beginning of October, after which date the presence of such bolls in the fields began to decrease, till in December the number reached its minimum. The decrease in the number of bolls showing signs of Bollworm attack after the middle of October was probably due to the fact that some of these affected bolls opened and produced good cotton and therefore were not taken into consideration. The share of Spotted Bollworm in the damage caused to these bolls was undoubtedly greater in the beginning of the season, *i.e.*, before October, but later on the damage was mainly caused by Pink-Bollworm.

In Table No. V, column 11 gives the percentage of attacked bolls containing caterpillars or showing only signs of attack. These figures give an exact idea of the ravages done by Bollworms during *kharif* 1924 and 1925 in the South-eastern Punjab. It will be seen that towards the end of August, the attack reached 30 per cent. of the bolls examined, and towards the end of October it rose by another 20 per cent., till in the end of December 70 per cent. of the bolls were found attacked. It will not be out of place to mention that 70 per cent. attack on the bolls was the average figure obtained for the entire South-eastern region, and not for any particular locality ; at certain places, however, the maximum attack reached as high as 90 to 100 per cent. In this connection, two facts must be borne in mind. Firstly, the percentages of attacked bolls cannot be taken to denote the actual rise or fall in the number of insects in the field, unless something is known of the number of bolls

on the plants at the time of collection. Secondly, as the attacked bolls are not always rendered entirely unfit for the production of cotton, they are not necessarily an absolute loss to the cotton crop. In fact, on some bolls the attack may be so slight that a normal yield is obtained and in majority of cases some *kapas* is always produced. It may be further mentioned that, when the percentage of bolls attacked by Pink-Bollworm reached 62·9, the percentage of seeds attacked was only 18·8, but the relation between the percentage of green bolls attacked and the actual loss to the cotton crop remains to be investigated. The data regarding the bolls attacked would, on the other hand, give some idea of the number of insects present and indicate that the moths oviposit on a very large number of bolls.

As regards the progress of Bollworm attack in relation to the growth of cotton plant, it will be seen that with the fall in the population of green bolls during November and December, the number of attacked bolls also decreases. During this period increase in the number of insect also stops, because all the larvae seen in the fields after October belong to the long-cycle generation, a fact which will be elucidated further on. Evidently, it is during October that the damage done by Pink-Bollworm to cotton crop in the South-eastern Punjab is the heaviest.

Multiple infestation of Pink-Bollworm.

It is a well known fact that a cotton boll may harbour more than one Pink-Bollworm at a time, and such cases of multiple infestation were not uncommon in samples examined during the course of the present investigation. With a view to ascertain the variation in this number, an accurate record of the caterpillars found in each attacked boll was kept. It will be seen in Table No. VI that during August usually one Pink-Bollworm was found in each attacked boll, during September the number varied from one to five, and in October as many as six were found per attacked boll. During November the number of Pink-Bollworm infesting a green boll reached its maximum and in certain cases as many as ten caterpillars were recorded in an attacked boll and in December this number showed a fall. Thus the number of Pink-Bollworms infesting an attacked boll varied with the bolling season of the cotton. According to the observations made by Willcocks[1] in Egypt, the multiple infestation reaches its maximum in October, *i.e.*, about a month earlier than in the South-eastern Punjab. From the study of Table No. VI it will also be seen that the average number of Pink-Bollworms infesting a boll continued to increase from the beginning of August to the beginning of December. Bolls containing more than five (six to ten) caterpillars each were found during November and December only.

[1] *Loc. cit.*, p. 42.

In the bolls attacked by Pink-Bollworm, the loculi were either (1) quite sound, (2) showed signs of attack or (3) actually contained Pink-Bollworm at the time of examination. In Table No. VII, column 6 shows the variation in the percentage of loculi of attacked bolls that showed signs of attack but contained no Pink-Bollworm. It will be seen that the number of such loculi rose gradually from the beginning of August (40 per cent.) to the beginning of October (50 per cent.), after which it steadily decreased till it reached its minimum in December (25 per cent.).

Most of the attacked loculi contained one Pink-Bollworm only, though a few had as many as five. The variation in the number of Pink-Bollworms found per attacked loculus is shown in columns 7 to 11 of Table No. VII from which it will be seen that the number of attacked loculi containing one Pink-Bollworm varied, during the cotton season, from 48 to 70 per cent., of those containing two Pink-Bollworms from 1 to 7 per cent., and those containing three to five Pink-Bollworms never exceeded 1 per cent. As a rule, the attacked loculi contained one Pink-Bollworm in August one to three in September and October, one to five in November and one to four in December.

In Table No. VII, columns 12 to 14 give information regarding the number of loculi damaged by Pink-Bollworm per boll. Each boll of *Desi* cotton shows three or four loculi, three being the usual number (about 80 per cent.). Cases of bolls with two or five loculi have also been recorded, but their number is quite negligible. As a rule, all the loculi of a boll are not attacked, the damage is usually restricted to two loculi, and the third loculus is invariably found to be sound. In the beginning of the season the number of bolls with two damaged loculi is small, but as the season progresses the number of such bolls increases.

Presence of Pink-Bollworm in different pickings of kapas.

The attack of Pink-Bollworm varies considerably in *kapas* of different pickings. With a view to gain information on this point, samples picked at various dates during *kharif* 1924 (Table No. VIII) were grouped into three pickings, early, middle and late, on a plan given below :—

Region	Cotton	DATE OF PICKING OF *KAPAS*.			
		EARLY	MIDDLE		LATE
		Before	From	To	After
South-eastern, Eastern, Central, and Northern Punjab.	*Desi* . .	15th September	16th September	15th October	16th October
	American .	30th September	1st October	31st October	1st November
Western Punjab including the Colony areas.	*Desi* . .	22nd September	23rd September	22nd October	23rd October
	American .	15th October	16th October	15th November	16th November

The following is a summary of the number of Pink-Bollworms found per 100 *tolas* of *kapas* of different pickings :—

Region	Cotton	Early	Middle	Late
South-eastern	*Desi*	308	364	496
	American*	69	119	183
Eastern	*Desi*	169	151	211
	American	266	200	220
Central	*Desi*	73	72	124
	American	55	52	33
Northern	*Desi*	37	22	59
	American	4	0	55
Western Punjab including the Colony areas	*Desi*	10	11	14
	American	9	9	10

It will be seen that the attack of Pink-Bollworm was higher in the middle pickings of *kapas* than in early ones, and highest in samples of late pickings. This difference was more marked in areas where the attack of Pink-Bollworm was severe.

III. Resting stage of Long-cycle caterpillars and emergence of Long-cycle moths.

Resting stage of Long-cycle caterpillars.

Platyedra gossypiella, Saund., hibernates during the cold season in the caterpillar stage, and consequently the life-cycle of the last brood is much prolonged. This brood has, therefore, been designated the 'long-cycle brood' as distinct from the previous 'short-cycle broods'. The long-cycle becomes the more important because of the fact that, in countries where winter is severe, the infestation is carried from year to year by moths developing from the long-cycle caterpillars. There is no apparent anatomical feature or structural difference by which the long and short-cycle larvæ can be distinguished from each other; it is only by the time taken by them to reach the adult stage that one can differentiate between the two. Very

* These samples were only procured from the Ferozepore District where the attack of Pink-Bollworm was least amongst all the Districts included in the South-eastern zone.

little was known regarding the emergence of long-cycle moths in the Punjab[1], and it was with a view to gain exact information of the bionomics of this brood that observations were started during the year 1924, and confirmed during 1925.

Pink-Bollworm resting in open bolls.

The most important problem in the control of Pink-Bollworm is the location of resting caterpillars during the interval between the last picking and sowing. At the end of the cotton season most of the larvæ find their way into the seed and lint of *kapas*, while a few remain in bolls which fall off from the plants, and some remain in bolls left on cotton sticks. The caterpillars in the seed and lint are of primary importance, not because the worms in picked cotton and ginned seeds would attract attention—being present in the marketable stuff, but mainly because the caterpillars resting in picked cotton and in ginned seed are the main sources of dispersion of the species and, as mentioned above, of the perpetuation of infestation. Consequently, in all control operations, it is, to a large extent, the long-cycle brood of caterpillars in picked cotton that is of importance.

In picked cotton Pink-Bollworms are found either (1) free in the lint, *viz.*, without cocoons, or (2) enclosed within fine silken cocoons spun in the lint, or (3) resting in chambers formed by the seeds in which the worms had been feeding. Most of the worms (92 to 95 per cent.) were found in the seeds, and only a few (5 to 8 per cent.) in the lint (Table No. IX).

The number of seeds forming the resting chamber varies from one to five in both the *Desi* and American cottons grown in the Punjab; Dr. Gough[2] found even six seeds utilized for this purpose in the Egyptian cottons. Table No. IX shows the number of caterpillars found resting in cotton lint and different forms of seed-chambers. In *Desi* cottons, 7·7 per cent. of the caterpillars were found resting in lint, and the other 92·3 per cent. utilized the protection afforded by seed-chambers (60·9 per cent. in 2-seeded, 19·3 per cent. in 3-seeded, 5·4 per cent. in 4-seeded, 4·9 per cent. in single-seeded and 1·8 per cent. in 5-seeded resting-chambers). In American cottons 5·4 per cent. of the caterpillars were found resting in lint, and the remaining 94·6 per cent. in seed-chambers (65·1 per cent. in 2-seeded, 16·6 per cent. in 3-seeded, 7·3 per cent. in single-seeded, and 4·3 per cent. in 4-seeded, and 1·2 per cent. in 5-seeded resting-chambers). It will be seen that the number of caterpillars resting in the lint of *Desi* cottons is slightly more (2·3 per cent.) than that in the lint of American cottons. Further, the number of caterpillars in 2-seeded chambers is greater in American than in *Desi* cottons (65·1 per cent. against 60·9 per cent.), while in 3 to 5-seeded chambers it is the other way about. It may be further added that inspite of the differences in the proportion of various types

[1] *Rept Proc Ent Meet. Pusa*, 1917, p. 113.
[2] Gough, L. H. The Pink-Bollworm in Egypt. *Rept. Proc. Third Ent. Meet. Pusa*, Vol. II, 1920, p. 476.

of seed-chambers in the two kinds of cotton, a certain number of caterpillars in each case was found to have used approximately the same number of seeds in the formation of their resting-chambers as shown below :—

Type of resting-chamber	Percentage of Pink-Bollworms found resting in	
	Desi cottons	American cottons
1-seeded	4·9	7·3
2-seeded	60·9	65·1
3-seeded	19·3	16·6
4-seeded	5·4	4·3
5-seeded	1·8	1·2
No. of seeds used for 100 resting-chambers	215·2	210·5

Willcocks[1] has attempted to prove that the popular impression that the resting Pink-Bollworms are found only in Double seeds and not in Single seeds, or at all events only rarely in the latter, is erroneous, and has actually stated that in samples of cotton-seeds of some of the Egyptian varieties most of the resting caterpillars were found in single seeds (89·4 per cent.) and not in double seeds (10·6 per cent.). On the other hand, observations carried out by the writer clearly show that in the case of *Desi* and American varieties of cotton grown in the Punjab, the number of caterpillars found in single-seeded chambers is only 5 to 8 per cent. as against 92 to 95 per cent. in double-seeded chambers. No doubt, it is easier to detect the presence of a resting caterpillar in a double seed than in single one, but samples, on which the observations were made, were examined twice and no single-seeded chamber was missed out.

The seeds composing the resting-chamber vary a great deal in size and stage of development. It has been ascertained that when once the cotton is mature for picking, its seeds are never attacked by Pink-Bollworm. The stage of development of the seed when the attack actually begins remains to be investigated.

Each resting-chamber invariably contains a single caterpillar which lies curved like a hoop with its two ends together.

Emergence of Long-cycle moths from open bolls.

Samples of *kapas* of both *Desi* and American varieties of different pickings, *viz.*, early, middle and late of *kharif* 1923 and 1924, were procured from different localities

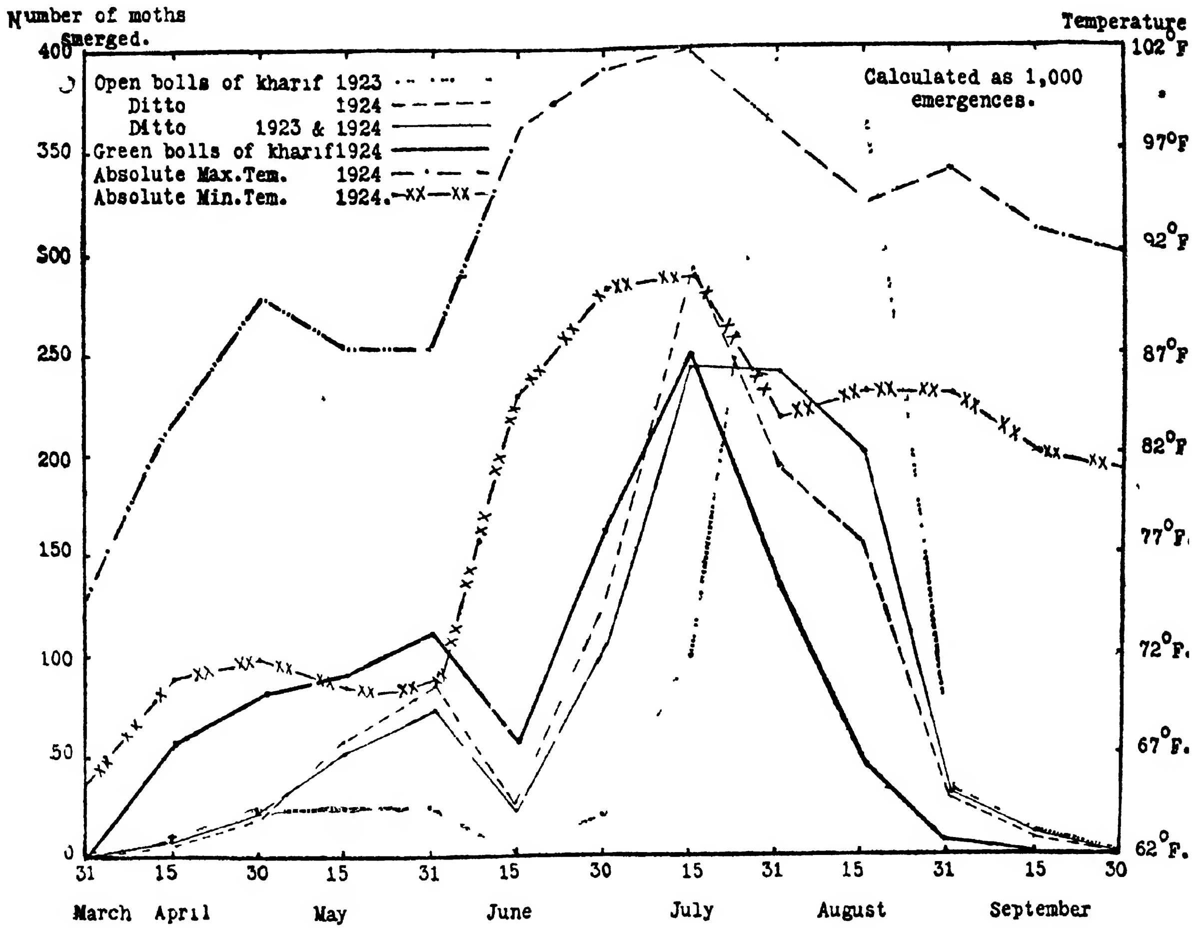
[1] *Loc. Cit.*, p. 139.

in the South-eastern Punjab. Each sample weighing 1 lb. was placed in an ordinary cage commonly used for breeding parasites. On one side of the box three small holes were made which were fitted with glass tubes. The moths attracted to diffused light in the glass tubes were daily captured, but for the sake of convenience, the daily records of emergences were added up into fortnightly figures which are given in Table No. X.

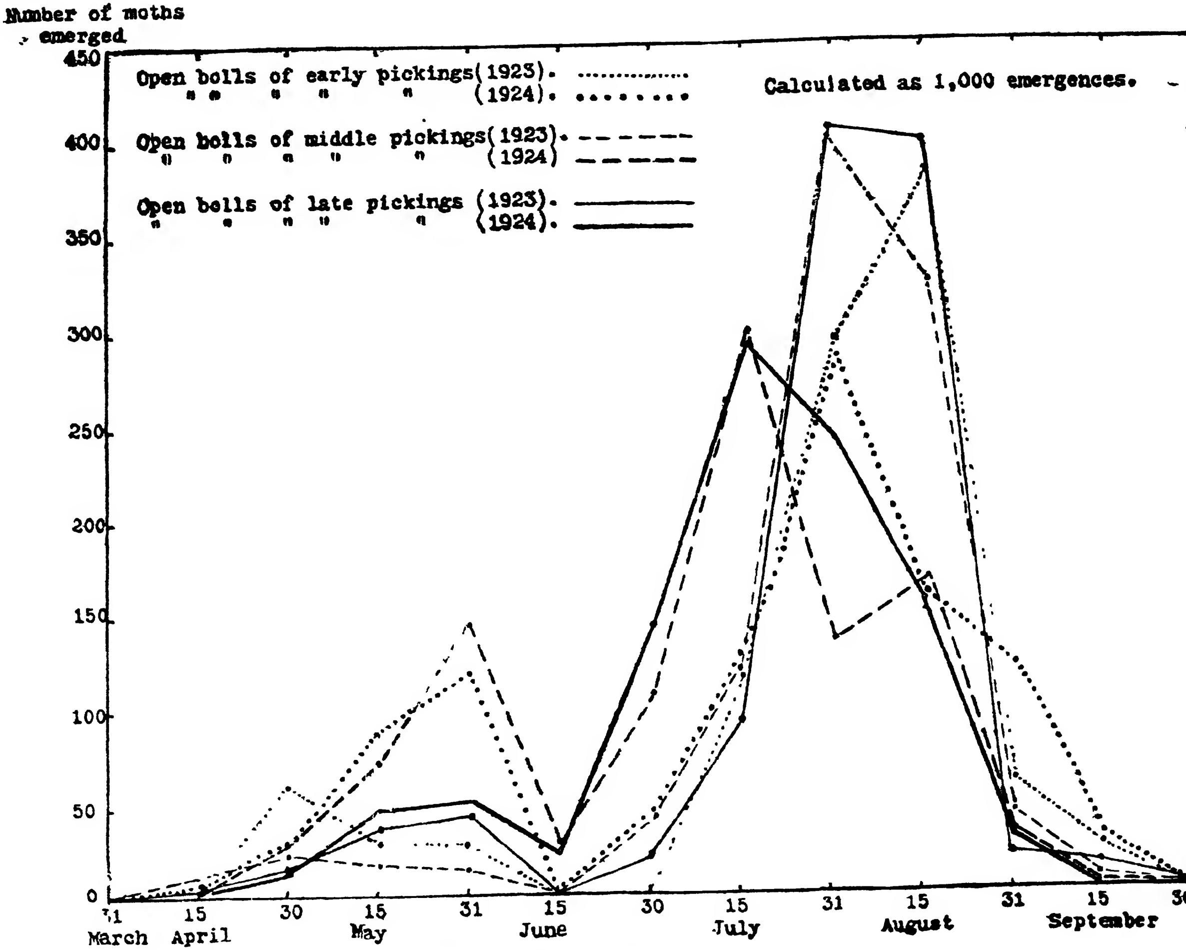
During the course of these experiments, it was noticed that the dates of emergence of moths differed with samples collected from different localities and that the different lots of resting caterpillars from the same locality behaved more or less alike. There was no emergence before the beginning of April and moths which emerged after 1st April were regarded as belonging to the long-cycle brood.

Table No. X shows the dates and the rate at which the emergence took place. In the first half of this table the actual number of moths that emerged is given, and in the second half, the number has been calculated per 1,000 emergences so as to facilitate comparison. The emergence of moths began early in April (in 1924 the first moth emerged on 2nd April and in 1925 a day earlier), and continued to the middle of November (in 1924 the last moth emerged on 24th September and in 1925 seven weeks later). During 1925 the main emergence stopped towards the end of September as in 1924, except that two moths emerged very late, one in the beginning of October and the other towards the middle of November. It can thus be concluded that the emergence of long-cycle moths from caterpillars resting in *kapas* continues for a period of about eight months, *i.e.*, from April to November. The emergence starts in April and increases steadily until the end of May, after which the rate declines rapidly for a week or so. Towards the middle of June it rises again and reaches its maximum during July and the first half of August, after which there is again a sudden decline, but the emergence continues till the middle of November. During 1924 the maximum emergence was from 15th July to 15th August; in 1925 it was during July (Plate XXVIII).

It is not out of place to mention that at the time the caterpillars enter into the resting stage, they are at different stages of development; while some are full-fed and ready to pupate, others are not ready for this change. During the spring, *i.e.*, after March, as the temperature rises, the resting caterpillars begin to pupate and later on emerge as moths. It is, therefore, probable that the full-fed larvæ are the first to pupate and emerge as moths during April and May, while caterpillars, which are not full-grown at the time of their entering into the resting stage, probably begin to feed after the cold weather and complete their growth before pupating. It is very likely, therefore, that caterpillars with incomplete growth at the time of entering into the resting stage are not fit for pupation before June, and all emergences before that date are from full-fed caterpillars. From the middle of June to the end of July, the temperature is highest in the Punjab, so a greater number of caterpillars become full-fed by then and pupate, and consequently the emergence of moths is highest during July and August

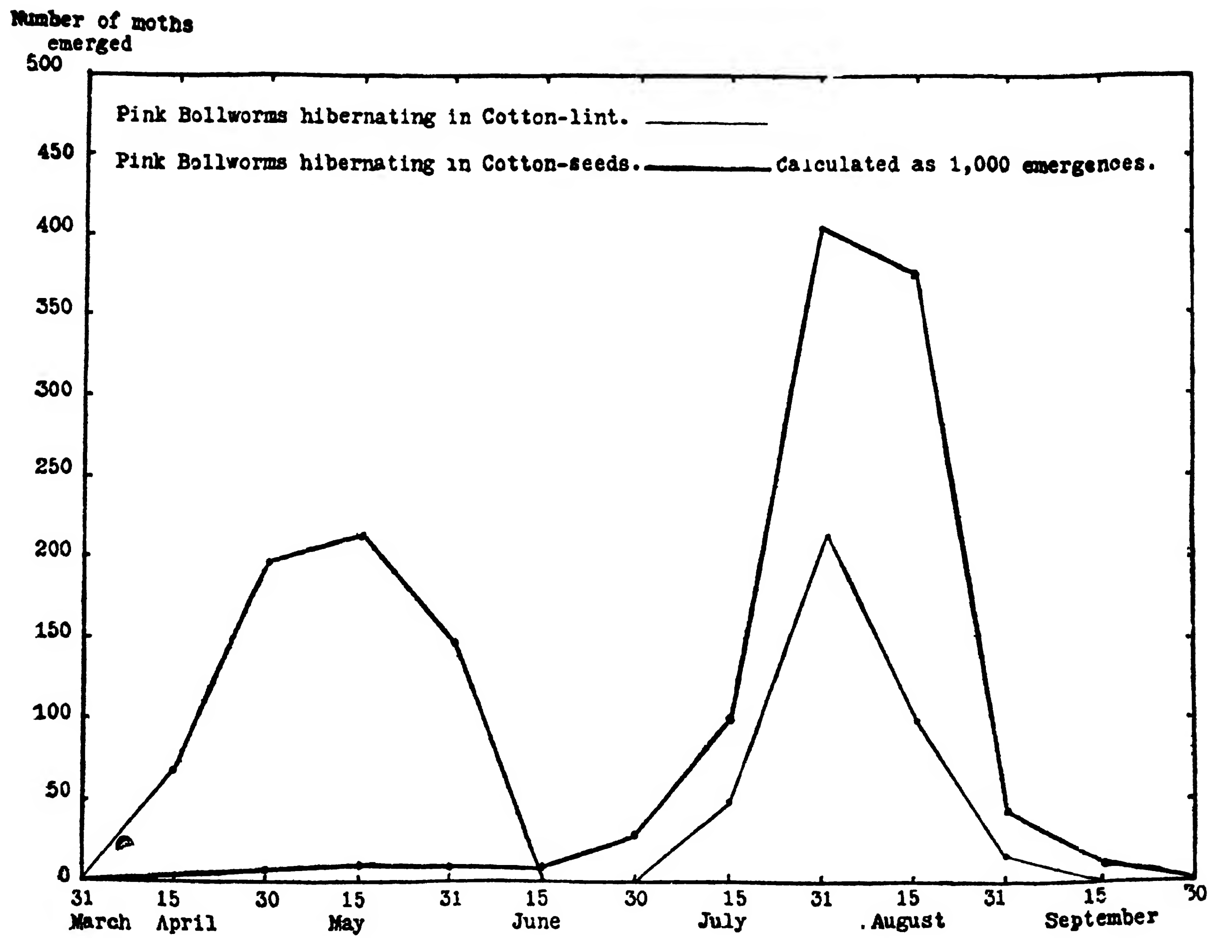


Fmergence of long-cycle moths from open bolls and green bolls.



Emergence of long-cycle moths from open bolls (seed-cotton) of different pickings.

PLATE XXX.



Emergence of long-cycle moths from lint-worms and seed-worms.

The explanation given above seems most plausible but the matter requires elucidation.

The possible relationship between the emergence of long-cycle moths and the temperature prevailing in the rearing room is shown on Plate XXVIII. It is significant that the main emergence of long-cycle moths began about three to four weeks after the hottest days in the Punjab, but the main rush of emergences was during the hot period.

The emergences secured from *kapas* of different pickings do not show any striking variation, but there appears to be a tendency in caterpillars resting in *kapas* of the early (October) pickings to emerge as moths in the first (April and May) rush of emergences and those resting in the late (November and December) pickings to emerge during the second (July and August) rush of emergences (Plate XXIX).

In experiments carried out during 1924 the emergence of moths from (1) Worms in lint, *i.e.*, the caterpillars found resting either free in cotton lint or in fine silken cocoons spun in the lint, and (2) Worms in seeds, *i.e.*, the caterpillars found in resting-chambers formed by the seeds, were recorded separately. The latter were further divided into two lots :—(*a*) Worms in single or 2-seeded resting-chambers, (*b*) worms in 3 to 5-seeded resting-chambers. Table No. XI gives details of these observations. It was noticed that the emergence of moths from caterpillars resting in lint was early, and a large number of moths emerged during April and May and the remaining during July and August; while in the case of caterpillars in seeds, the emergence was meagre till the beginning of July and reached its maximum towards the end of July and the beginning of August (Plate XXX). Thus one finds that, while in caterpillars in seeds there was a single period of 'rush of emergences,' for those in the lint there were two such periods.[1]

As regards the proportion of resting caterpillars which reached the adult stage, it was 17 per cent. in the case of worms in the seeds, as against 5·4 per cent. of worms in the lint. The caterpillars resting in different types of seed-chambers showed practically no difference as regards the time of emergence, but the number of moths emerging from them varied directly with the number of seeds forming the chamber, *i.e.*, the emergence was 15·9 per cent. from worms in single and 2-seeded resting-chambers and 23·6 per cent. from those resting in 3 to 5-seeded ones.

Thus it will be seen that, of the caterpillars resting in picked cotton, it is the worms in seeds that form the main source of infection of the new crop. All precautionary measures should certainly be taken against seed-worms, but at the same time lint-worms should not be ignored. If the whole of the cotton crop is ginned before the middle of March, the chances are that caterpillars lint will all die. But the low grade *kapas* which is stored in ginning factories for cleaning the gins, the heap of *patti*[2] left under the riddle in ginning factories, open bolls

[1] In the experiments carried out during 1927, most of the lint-worms emerged as moths during April and May and very few during July and August.

[2] This is a coarse material seen in cotton ginning factories under the riddle (vernacular name *Jaffary*). It consists mostly of dust and withered leaves and small branches of cotton plants.

and loculi which have dropped in the fields or elsewhere, and lastly *kapas* stored by petty shopkeepers and villagers, will still remain the main sources of infection.

Emergence of long-cycle moths from green bolls and the proportion of short and long-cycle caterpillars present in green bolls collected at various dates.

The Pink Bollworms resting in green bolls are probably of less importance than those in open bolls. These caterpillars, being left in the fields or carried along with the cotton sticks, are placed under more adverse conditions than those in open bolls, which find their way to the ginneries where a favourable atmosphere is provided for them in the stores. With a view to obtain information regarding the emergence of long-cycle moths and to ascertain the presence of long and short-cycle caterpillars of *P. gossypiella*, Saund., in green bolls during the cotton season, a weekly supply of bolls was procured from September to December 1924, collected from different localities in the South-eastern Punjab.

Each sample was placed in a cage having fine brass wire gauze all round, and a removable glass cover at the top. For lack of sufficient cages, rearing was also done in glass dishes. In all about one hundred cages and dishes were used and the experiment continued for full one year, from September 1924 to August 1925.

The emergence of moths from each cage or dish was recorded every day, but for convenience, the daily records have been added into fortnightly figures, which are given in Table No. XII. It will be seen that the emergence of moths continued from September 1924 to January 1925, and from March to August 1925. There were, however, no emergence for a period of 68 days, from 17th January to 25th March 1925.[1] All the moths that emerged before 17th January 1925 were regarded as short-cycle moths and those after 25th March 1925 as long-cycle moths.

In Table No. XII, column 18 gives the actual number of long-cycle moths that emerged, and in column 19 this number has been calculated per 1,000 so as to facilitate comparison. In Plate I, the data are represented by a curve, which shows that the emergence of long-cycle moths from green bolls was almost similar to that from open bolls except that there was no emergence after the third week of August, and comparatively more moths came out during April to June. Table No. XII also records the emergence of short-cycle moths from each week's (September to December, 1924) collection of green bolls. As the number of bolls under observation, for each week's collection, differed, therefore, in order to facilitate comparison the emergences from each week's material have been calculated

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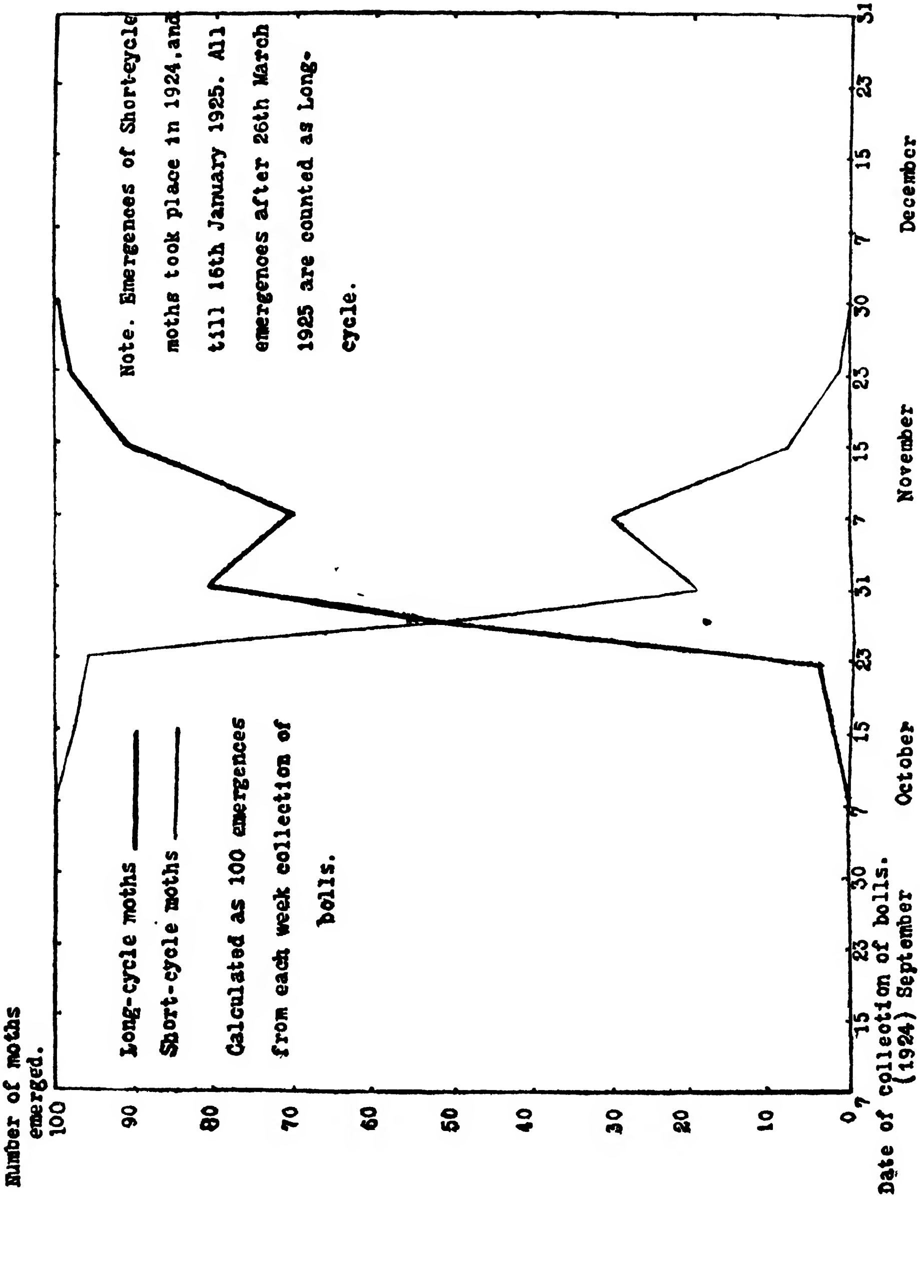
[1] In Egypt, as pointed out by Willcocks (p. 152), the period of absolute quiescence is of 81 days, 21st January to 12th April.

PLATE XXXI.



Presence of short and long-cycle moths in green bolls collected at various dates.

on the basis of one hundred moths, and the figures so obtained are represented in the form of curves on Plate XXXI. It will be seen that during the first five weeks, *viz.*, 1st September to 7th October, all the caterpillers present in green bolls belonged to the short-cycle generation, and those present during the last five weeks, *viz.*, 24th November to 31st December, belonged to the long-cycle brood. It was only the caterpillars in the intervening period of six weeks, *i.e.*, 8th October to 23rd November, that belonged both to short and long-cycle broods. It will also be seen that during the first two weeks, *i.e.*, 8th October to 23rd October, the number of the long-cycle larvæ was very small (4 per cent.), while during the latter four weeks, *i.e.*, 24th October to 23rd November, their number increased enormously and was as high as 75 per cent. or even more. Thus the first appreciable increase in the number of the long-cycle caterpillars in green bolls was after 24th October, though the first appearance of such larvæ was noticed on 8th October. The short-cycle larvæ were noticed as late as 20th November, and it was about 25th October that the number of short and long-cycle caterpillars was equal in green bolls.

In Table No. XIII, figures of Table No. XII have been rearranged so as to indicate in weeks the variation of the resting period of Pink-Bollworm in green bolls. It will be seen that Pink-Bollworm can remain in resting condition from 12 to as many as 40 weeks, this period being less in the case of caterpillars entering the resting stage during December than in case of those that start resting in October or November.

In the end it will not be out of place to mention that in the present investigation the duration of resting stage of Pink-Bollworm was found to be less than a year, and the emergence of a large number of moths was recorded during July and August, the period when cotton crop was beginning to have buds, flowers and bolls, and thus provide suitable conditions for the newly hatched caterpillars.

Distinction between real and apparent damage.

The figures showing the extent of attack of Pink-Bollworm on green bolls, *kapas* and cotton-seeds, as worked out in the present case, give an idea of the relative abundance of the insect, but do not in any way represent the extent of actual damage done to the cotton crop.

When determining the extent of infestation in a crop, distinction must be made between the 'real damage' and the 'apparent damage.' From an examination of picked cotton one can only obtain an idea of the damage done to those bolls which had reached maturity and produced pickable cotton, but cannot gain any information about the fate of those bolls that did not mature because of the damage done to them by Pink-Bollworm and other cotton pests. Thus the real damage to the crop must always be regarded as much higher than the apparent damage. Further, as samples of *kapas* were examined from 1st January to 31st March, *i.e.*, four to sixteen weeks after the cotton was picked, it is possible, in fact probable, that many of the larvæ had emerged out as moths and were not taken into

consideration and thus even the 'apparent damage' was below the actual loss. Lastly, there remains the possibility of the caterpillars leaving the open bolls to pupate elsewhere, and if this possibility is taken into account, the figures for 'real damage' would be higher still.

The observations made on green bolls give a better idea of the severity of Pink-Bollworm attack than those on seed-cotton, because green bolls, harbouring relatively a large number of caterpillars, give a true indication of the state of attack. But even the figures of attack obtained from the examination of green bolls are below the real figures of damage, for the bolls shed due to attack have not been taken into consideration.

Financial loss to the cotton crop.

The yearly financial loss caused by the attack of Bollworms to the cotton crop is undoubtedly considerable. In most localities of the South-eastern Punjab the major portion of the loss is certainly caused by Pink-Bollworm, but in the Colony areas Spotted-Bollworm appears to be the predominant species. The other Bollworms, such as *Heliothis obsoleta*, *Dichocrocis punctiferalis*, have always held the third place in importance as cotton pest. Calculating on the basis of correlation between the percentage of attacked seeds in pickable cotton (Table No. IV) and the percentage of loss in the seed-cotton, which has been determined by Egyptian workers[1], the annual loss to cotton crop amounts to over sixty *lakhs* of rupees. It may be pointed out that the percentage of damaged seeds was calculated from samples ginned in the factories, and it is certain that a large portion of the damaged seeds must have been crushed to pieces during the ginning operation and could not be taken into account. Moreover, a certain proportion of seeds was totally consumed and no trace was left of them. It, therefore, appears that the actual loss must have been considerably more than sixty *lakhs*, and may be safely put down as one *crore* of rupees. In addition to the failure of cotton to the extent of sixty *lakhs* due to Bollworms, there is always a considerable loss due to the low price at which damaged seeds and inferior quality of *kapas* are sold. If this amount is also taken into consideration then the loss will exceed rupees one *crore*.

Summary.

(1) The facts brought forward go to prove that Pink-Bollworm is a serious pest of cotton-seeds in the South-eastern Punjab, but its intensity of attack is successively reduced in the Eastern region, Central Punjab and the Northern Area, and is least in the Western Punjab including the Colony areas. It seems likely that the climatic conditions in the Western Punjab are so adverse to the increase

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[1] Abrahim Bishera. A preliminary note on the estimation of loss by Bollworms. *Tech. and Sci. Bull. No. 39, Min. Agri., Egypt,* Cairo, *1924*, p. *20*.

of Pink-Bollworm that it has not been able to attain the status of a pest. On account of the rapid changes that are taking place in the climatic conditions in the irrigated tracts, these tracts at no distant date may, however, become a congenial place for the pest.

(2) The attack of Pink-Bollworm differs at different times during the growing period of cotton. In the South-eastern Punjab its attack in the beginning of August is 10 per cent. on bolls, 8·4 per cent. on loculi, and 4·4 per cent. on seeds, but towards the end of September it reaches 15·2 per cent. on bolls, 9·7 per cent. on loculi, and 5·1 per cent. on seeds. After the middle of October the progress of attack is very rapid and it reaches its maximum (63 per cent. on bolls, 42 per cent. on loculi, and 18 per cent. on seeds) by the end of December. The above mentioned rate of increase of this insect is calculated irrespective of the number of bolls actually present on the plants. During November and December the population of green bolls on the plants decreases considerably and consequently the proportion of attacked bolls in the fields increases. It is during October that the damage caused by Pink-Bollworm is the maximum.

(3) As compared to Pink-Bollworm, the Spotted-Bollworm is a minor pest in the South-eastern Punjab ; its attack varies between 1·1 per cent. and 3·9 per cent., the main period of its activity being before the middle of September, *i.e.*, a month earlier than that of Pink-Bollworm. The number of bolls affected by a combined attack of Pink and Spotted-Bollworms is very slight and does not exceed 2 per cent. The attack of both the Bollworms on green bolls (bolls actually containing one or more caterpillar or showing mere signs of damage) reaches 30 per cent. even in the beginning of the season, *i.e.*, towards the end of August. After a period of six weeks, *i.e.*, towards the beginning of October, the attack rises by another 20 per cent. until in the beginning of December 70 per cent. of the bolls are attacked.

(4) The number of Pink-Bollworms infesting an attacked boll is one in August, one to five in September, one to six in October, one to ten in November and one to nine in December. The attacked loculi contain, as a rule, one Pink-Bollworm in August, one to three in September and October, one to five in November and one to four in December.

(5) The attack of Pink-Bollworm varies in *kapas* of different pickings; early and middle pickings are generally affected to a moderate degree, whilst late pickings are seriously damaged.

(6) A large number of Pink-Bollworms pass the resting stage in picked cotton. They are mostly found in seeds, but a few are found in lint, either free or in fine silken cocoons. Of caterpillars resting in lint, about 5 per cent. reach the imago stage under laboratory conditions. The moths emerging from these caterpillars show two periods of 'rush of emergences'; the first period is during April and May, and the second during July and August. During April and May the cottons are still in the germinating stage in the Punjab, and most probably moths

emerging at this time do not contribute towards the damage done to the crop. The second 'rush of emergences' is certainly dangerous because during this period (July and August) the crop is bearing bolls, buds and flowers, and Pink-Boll-worms can find ample food for their development.

(7) The caterpillars resting in seeds are mostly found in 2-seeded chambers, a lesser number in 3-seeded chambers, lesser still in single-seeded chambers and least in 4 and 5-seeded chambers. Of caterpillars resting in seeds, about 17 per cent. reaches the imago stage under laboratory conditions. The emergence of moths from these caterpillars continues from April to November, but the main rush is during July and the first half of August—the period when the cotton crop is producing bolls in quick succession, and thus provides most suitable condition for the newly hatched caterpillars.

(8) The emergence of moths, short and long-cycle, of *Platyedra gossypiella*, Saund., continues throughout the year except for a period of about ten weeks, from 17th January to 25th March. The emergence of long-cycle moths continues from April to November, the maximum being in July and the first half of August.

(9) All the Pink-Bollworms present in green bolls before 7th October belong to the short-cycle brood, and after 21st November to the long-cycle generation, while caterpillars present from 8th October to 20th November belong both to the short and long-cycle broods. It is sometimes about the 25th October that the number of short and long-cycle caterpillars is equal in green bolls. In the present investigation the resting period of Pink-Bollworm is found to vary from 12 to 40 weeks.

Table I.

Relative accuracy of samples of 50 and 100 green bolls each.

Locality	Date of taking sample	Serial No. of sample	Number of bolls examined	Number of bolls attacked by Pink-Bollworm	Percentage of attacked bolls	Deviation from normal percentage attack
1	2	3	4	5	6	7
Ballabgarh (District Rohtak)	6th December, 1924.	1	50	37	74	+6
		2	50	29	58	—10
		3	50	33	66	—2
		4	50	34	68	0
		5	50	42	84	+16
		6	50	37	74	+6
		7	50	35	70	+2
		8	50	34	68	0
		9	50	35	70	+2
		10	50	30	60	—8
		11	50	35	70	+2
		12	50	30	60	—8
	Average .		.		68	..
Ambala . . .	18th December, 1924.	1	50	25	50	+6
		2	50	19	38	—6
		3	50	16	32	—12
		4	50	19	38	—6
		5	50	16	32	—12
		6	50	25	50	+6
		7	50	29	58	+14
		8	50	27	54	+10
	Average .	..	.	..	44	..
Ballabgarh . . .	....	1 & 2	100	66	66	—2
		3 & 4	100	67	67	—1
		5 & 6	100	79	79	+11
		7 & 8	100	69	69	+1
		9 & 10	100	65	65	—3
		11 & 12	100	65	65	—3
Ambala	....	1 & 2	100	44	44	0
		3 & 4	100	35	35	—9
		5 & 6	100	41	41	—3
		7 & 8	100	56	56	+12

0

TABLE II.

Attack of Pink-Bollworm on green bolls during kharif, 1924.

Region	Date of taking samples	Variety of cotton	Number of samples examined	Number of Green Bolls — Examined	Number of Green Bolls — Attacked by Pink-Bollworm	Number of Green Bolls — Percentage attack
1	2	3	4	5	6	7
	1924.					
I. South-eastern Punjab	1st to 15th Aug .	*Desi*	4	319	6	1·9
	16th to 31st Aug .		14	1,004	45	4·5
	1st to 14th Sept		22	1,896	188	10·0
	16th to 30th Sept		29	2,951	435	14·7
	1st to 15th Oct		36	3,472	654	18·8
	16th to 31st Oct		37	3,676	1,360	36·9
	1st to 15th Nov		37	3,241	1,384	42·7
	16th to 30th Nov		29	2,731	1,285	47·1
	1st to 15th Dec		37	2,951	2,000	67·7
	16th to 31st Dec .		19	1,687	1,115	66·1
	16th to 31st Aug. .	American	1	92	1	1·1
	1st to 15th Sept .		5	564	14	2·5
	16th to 30th Sept.		12	1,159	68	5·9
	1st to 15th Oct .		13	1,331	125	9·4
	16th to 31st Oct		13	1,239	296	23·9
	1st to 15th Nov .		9	737	237	32·1
	16th to 30th Nov .		8	702	181	25·8
	1st to 15th Dec. .		6	509	142	27·9
	16th to 31st Dec		5	453	271	59·8
II. Eastern Punjab . .	16th to 31st Dec	*Desi* .	8	100	176	14·0
	1st to 15th Nov. .	American .	1	82	46	56·1
III Central Punjab . .	15th to 30th Sept	*Desi* . .	2	153	8	5·2
	1st to 15th Oct		2	210	15	7·1
	16th to 31st Oct		6	457	11	2·4
	1st to 15th Nov .		1	185	6	3·2
	16th to 30th Nov		1	93	39	41·9
	16th to 31st Oct	American .	3	284	4	1·4
IV. Northern Area . .	. . .	. .	. .	. .	. .	. .
V. Western Punjab including the Colony areas	1st to 15th Aug .	*Desi* .	1	100	0	0
	16th to 31st Aug .		2	161	3	1·2
	1st to 15th Sept .		1	100	0	0
	16th to 30th Sept .		1	100	1	1·0
	1st to 15th Oct .		1	100	1	1·0
	16th to 31st Oct. .		1	100	1	1·0
	1st to 15th Nov		4	330	5	1·5
	16th to 30th Nov .		6	650	2	0·3
	1st to 15th Dec .		9	872	40	4·6
	16th to 31st Dec. .		1	125	5	4·0
	1st to 15th Oct. .	American .	1	100	0	0
	16th to 31st Oct. .		1	100	0	0
	1st to 15th Nov. .		3	290	0	0
	16th to 30th Nov .		1	100	1	1·0
	1st to 15th Dec. .		14	1,047	34	3·2

TABLE III.

Infestation of Pink-Bollworm in kapas (seed-cotton) during kharif, 1923 and 1924.

District	*Tahsil*	No. of samples examined	Weight in *tolas* of *kapas* examined	No. of Pink-Bollworms found	No. of Pink-Bollworms calculated per 100 *tolas* of *kapas*
1. Gurgaon	Gurgaon **	3	120	430	358
	Palwal *	1	20	43	215
	Nuh *	1	44	145	330
	Firozpur Jhirka *	2	47	113	240
	TOTAL	7	231	731	316
2. Rohtak	Rohtak *	2	72	291	401
	Guhana **	6	120	565	471
	TOTAL	8	192	856	445
3. Karnal	Karnal	16	476	1,090	229
	Kaithal	4	119	266	223
	Panipat **	7	142	829	584
	TOTAL	27	737	2,185	295
4. Hissar	Hissar	3	157	430	274
	Hansi	19	514	938	182
	Bhiwani *	2	82	169	206
	Fatehabad	1	44	67	152
	TOTAL	25	797	1,604	201
5. Ferozepore	Ferozepore*	11	549	1,958	357
	Moga	19	728	2,011	392
	Zira **	1	20	29	145
	Mukatsar	7	157	123	78
	Fazilka	11	397	229	58
	TOTAL	49	2,051	5,250	256
6. Ludhiana	Samrala	14	378	1,191	315
	Jagraon **	3	60	181	302
	TOTAL	17	438	1,372	313

TABLE III—*contd.*

Infestation of Pink-Bollworm in kapas (seed-cotton) during kharif, 1923 and 1924—contd.

District	*Tahsil*	No. of samples examined	Weight in *tolas* of *kapas* examined	No. of Pink-Bollworms found	No. of Pink-Bollworms calculated per 100 *tolas* of *kapas*
7. Jullundhar	Jullundhar	20	478	1,619	339
	Nakodar	10	224	780	348
	Phillaur	7	147	745	507
	TOTAL	37	849	3,144	370
I. South-eastern Punjab	TOTAL	170	5,065	15,142	299
9. Ambala	Ambala	9	301	301	100
	Jagadhri **	6	180	225	125
	Naraingarh **	6	181	338	186
	Kharar **	9	241	230	99
	Ropar **	9	242	158	65
	TOTAL	39	1,145	1,261	110
10. Hoshiarpur	Hoshiarpur	5	145	274	189
	Una **	6	167	33	19
	Dasuha	25	474	1,631	344
	TOTAL	36	786	1,938	247
11. Kangra	Kangra	7	184	234	127
	Palampur	4	108	221	205
	Dehra	4	99	289	290
	Hamirpur	7	182	356	196
	TOTAL	22	573	1,100	192
12. Gurdaspur	Gurdaspur	3	82	126	152
	Pathankot	4	104	332	319
	Shakargarh	10	280	464	166
	Batala	4	100	56	56
	TOTAL	21	566	978	173

TABLE III—*contd.*

Infestation of Pink-Bollworm in kapas (seed-cotton) during kharif, 1923 and 1924—contd.

District	*Tahsil*	No of samples examined	Weight in *tolas* of *kapas* examined	No. of Pink-Bollworms found	No. of Pink-Bollworms calculated per 100 *tolas* of *kapas*
13. Amritsar	Amritsar	17	521	527	101
	Taran Taran	37	1,075	1,354	126
	Ajnala **	12	240	315	131
	TOTAL	66	1,836	2,196	120
14. Sialkot	Sialkot	27	675	2,440	362
	Narowal **	3	79	160	203
	Daska **	18	360	433	120
	Pasrur	5	151	274	181
	TOTAL	53	1,265	3,307	261
II. Eastern Punjab	TOTAL	237	6,171	10,780	175
15. Lahore	Lahore	13	276	163	95
	Chunian	16	476	250	53
	Kasur **	7	232	175	76
	TOTAL	36	984	588	60
16. Gujranwala	Gujranwala	8	205	123	60
	Wazirabad	4	143	85	60
	Hafizabad	19	462	141	31
	TOTAL	31	810	349	43
17. Gujrat	Gujrat	6	244	277	113
	Kharian **	5	210	267	127
	Phalian **	6	120	112	93
	TOTAL	17	574	656	114
III. Central Punjab	TOTAL	84	2,368	1,593	67
18. Jhelum	Jhelum	7	164	171	104
	Chakwal	10	215	16	8
	Pind Dadan Khan **	3	60	4	7
	TOTAL	20	439	191	43

TABLE III—*contd.*

Infestation of Pink-Bollworm in kapas (seed-cotton) during kharif, 1923 and 1924—contd.

District	*Tahsil*	No. of samples examined	Weight in *tolas* of *kapas* examined	No. of Pink-Bollworms found	No. of Pink-Bollworms calculated per 100 *tolas* of *kapas*
19. Rawalpindi .	Rawalpindi . .	9	297	29	10
	Kahuta . .	3	132	25	19
	Gujarkhan . .	9	305	235	77
	TOTAL .	21	734	289	39
20. Campbellpore	Campbellpore ** .	15	326	58	18
	Talagang . .	5	125	16	13
	Fatehjang . .	8	180	28	16
	Pindigheb * . .	1	45	2	5
	TOTAL .	29	676	104	15
IV. Northern Region	TOTAL .	70	1,849	584	32
21. Mianwali . . .	Mianwali ** . .	9	224	3	1
	Isakhel ** . .	12	260	0	0
	Bhakhar ** . .	6	120	0	0
	TOTAL .	27	604	3	1
22. Muzaffargarh	Muzaffargarh .	10	225	50	22
	Leiah . . .	15	322	0	0
	Alipur ** . .	5	210	28	13
	TOTAL .	30	757	78	10
23. Dera Ghazi Khan .	D. G. Khan . .	15	336	15	4
	Sanghar ** . .	6	140	8	6
	Jampur ** . .	3	120	12	10
	Rajanpur ** . .	3	125	40	32
	TOTAL .	27	721	75	10

TABLE III—*concld.*

Infestation of Pink-Bollworm in kapas (seed-cotton) during kharif, 1923 and 1924—contd.

District	*Tahsil*	No. of samples examined	Weight in *tolas* of *kapas* examined	No. of Pink-Bollworms found	No. of Pink-Bollworms calculated per 100 *tolas* of *kapas*
24. Multan	Multan ** . .	33	700	3	1
	Shujabad ** . .	3	104	0	0
	Lodhran . .	33	791	56	7
	Kabirwala ** .	30	616	0	0
	Mailsi ** . .	12	278	26	9
	TOTAL .	111	2,489	85	3
25. Montgomery	Montgomery . .	37	1,364	53	4
	Dipalpur ** . .	24	551	227	41
	Okara ** . .	35	890	260	29
	TOTAL .	96	2,805	540	19
26. Sheikhupura	Sheikhupura . .	46	1,069	154	14
	Nankana Sahib ** .	10	292	6	2
	Shahdara ** .	7	272	151	55
	TOTAL .	63	1,633	311	19
27. Lyallpur	Lyallpur . .	16	615	30	5
28. Jhang	Jhang . . .	11	311	2	1
	Chiniot ** . .	20	802	62	8
	Shorkot ** . .	6	285	3	1
	TOTAL .	37	1,398	67	5
29. Shahpur	Shahpur . .	7	136	3	2
	Sargodha . .	7	268	14	5
	Khushab ** . .	12	337	35	10
	Bhalwal . .	26	578	142	25
	TOTAL .	5[illegible]	1,319	194	15
V. Western Punjab including the Colony area.	TOTAL .	459	12,341	1,383	11

NOTE.—Samples of *kharif* 1923, only were examined from *tahsils* marked (*), of *kharif* 1924, from *tahsils* marked (**), while from the rest the samples were for both the seasons.

Table IV.

Number of Pink-Bollworms found and cotton seeds damaged during kharif, 1923 and 1924.

District	Number of samples examined	Total Number of seeds examined	Number of seeds damaged by Bollworms	Percentage of damaged seeds	Number of Pink-Bollworms found	Number of Pink-Bollworms calculated per 10,000 seeds
1. Gurgaon	3	16,913	3,690	21 8	255	150
2. Karnal	1	9,145	1,635	17 8	61	66
3. Rohtak	16	86,380	19,432	22 5	550	64
4. Hissar	9	48,389	5,936	12 2	154	32
5. Ferozepore	5	36,210	3,111	8 5	94	26
6. Jullundhar	9	44,887	2,603	5 8	83	19
7. Ludhiana	7	48,316	3,569	7 3	112	23
I. South-eastern Punjab	50	2,90,240	39,976	13 8	1,309	45
8. Ambala	2	10,413	615	5 9	71	68
9. Hoshiarpur	2	9,925	658	6 6	63	63
10. Gurdaspur	3	20,702	900	4 3	30	14
11. Sialkot	2	10,451	545	5·2	11	11
11 Kangra	6	36,392	2,120	5 8	116	32
13 Amritsar	2	9,219	454	4 9	25	27
II. Eastern Punjab	17	97,102	5,292	5 4	316	32
14. Lahore	7	44,523	1,801	4 0	17	4
15. Gujranwala	6	33,571	1,609	4 7	29	9
16. Gujrat	2	20,600	1,060	5 1	60	29
III. Central Punjab	15	98,694	4,470	4 5	106	11
17. Jhelum	3	16,074	580	3 6	25	15
18 Rawalpindi	3	29,092	781	2 6	21	7
19. Campbellpore	3	23,173	414	1 7	6	3
IV. Northern Area	9	68,339	1,775	2 5	52	7
20. Mianwali	3	14,162	326	2 3	4	3
21. Muzaffargarh	3	16,294	644	3·9	0	0
22. Dera Ghazi Khan	3	26,442	397	1 5	0	0
23 Multan	2	6,455	60	0 9	0	0
24. Montgomery	1	5,460	55	1 0	1	2
25. Lyallpur	2	13,627	152	1 1	0	0
26. Shahpur	2	7,368	110	1·4	1	1
27. Jhang	Nil	..	..	..	..	..
28. Sheikhupura	3	33,048	1,337	4 0	49	14
V. Western Punjab including the Colony areas.	19	1,22,856	3,081	2 5	55	4

TABLE V.

Seasonal variation in the intensity of Bollworm attack in green bolls of Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925.*

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM					Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing *signs* of Bollworm attack	Total of columns 4, 9 & 10	Number of Pink-Bollworms found per 100 bolls examined
			Per cent. bolls attacked	Per cent. loculi attacked	Per cent. seeds attacked	Absolute per cent. of attacked loculi	Absolute per cent of attacked seeds				
1	2	3	4	5	6	7	8	9	10	11	12
I. DISTRICT FEROZEPORE.											
1. Tahsil Ferozepore .	1st to 15th Aug. .	181	14·9	68·5	40·0	10·2	5·9	1·1	13·8	29·8	18·2
	16th to 31st Aug.	123	30·1	71·2	46·1	22·7	15·8	6·5	21·1	57·7	38·2
	1st to 15th Sept.	246	14·6	72·1	45·1	11·3	6·5	6·9	21·1	42·6	18·7
	16th to 30th Sept.	300	14·0	43·8	23·7	6·0	3·3	1·6	12·3	28·0	16·3
	1st to 15th Oct .	470	15·9	73·2	47·2	11·3	7·2	1·2	15·5	32·7	25·7
	16th to 31st Oct.	389	29·0	61·2	27·1	17·2	7·9	0·8	8·4	38·3	45·7
	1st to 15th Nov. .	220	36·3	49·4	16·7	16·5	6·3	1·4	7·3	45·0	50·0
	16th to 30th Nov.	437	39·1	60·0	20·7	24·5	8·8	0·7	8·5	48·3	76·2
	1st to 15th Dec. .	197	54·8	69·7	34·5	37·4	17·2	1·1	9·1	65·0	76·1
	16th to 31st Dec.	100	76·0	71·0	41·5	54·2	30·4	0	5·0	81·0	96·0
2. Tahsil Moga . .	1st to 15th Aug. .	71	30·0	59·5	35·8	19·2	11·1	1·4	11·2	43·6	36·6
	16th to 31st Aug.	46	26·1	54·1	30·1	13·1	7·4	0	21·7	47·8	28·7
	1st to 15th Sept.	221	35·5	76·4	48·0	26·6	17·2	1·8	25·8	63·3	46·6
	16th to 30th Sept.	200	11·0	55·2	28·5	5·6	2·8	0	18·5	29·5	11·5
	1st to 15th Oct. .	147	19·1	60·2	35·4	12·0	7·3	0·7	17·0	37·4	28·6
	16th to 31st Oct.	193	44·0	64·0	26·8	27·4	11·3	0·5	9·3	53·9	74·1
	1st to 15th Nov. .	134	26·8	55·4	28·6	15·3	7·8	0	17·9	44·7	38·1

TABLE V—*contd.*

***Seasonal variation in the intensity of Bollworm attack in green bolls of* Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925*—contd.**

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM: Per cent. bolls attacked	Per cent loculi attacked	Per cent. seeds attacked	Absolute per cent. of attacked loculi	Absolute per cent. of attacked seeds	Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing *sign* of Bollworm attack	Total of columns 4, 9 & 10	Number of Pink-Bollworms found per 100 bolls examined
1	2	3	4	5	6	7	8	9	10	11	12
I. DISTRICT FEROZEPORE—*contd.*											
2. Tahsil Moga—*contd.*	16th to 30th Nov.	100	48·0	82·8	37·5	41·1	18·7	0	5·0	53·0	72·0
	1st to 15th Dec.	100	43·0	55·7	23·9	24·0	10·3	7·0	3·0	53·0	64·0
	16th to 31st Dec.	96	26·0	48·2	23·2	12·3	5·8	5·2	3·1	34·4	33·3
3. Tahsil Zira	1st to 15th Aug.	187	14·9	54·4	20·5	8·2	3·0	1·1	10·1	26·2	18·7
	16th to 31st Aug.	299	13·0	73·0	49·5	9·6	6·6	7·7	3·3	24·0	35·8
	1st to 15th Sept.	209	2·9	55·0	23·6	1·6	0·6	6·7	13·0	22·5	2·9
	16th to 30th Sept.	200	17·5	44·7	23·7	8·1	4·2	1·0	16·0	34·5	19·5
	1st to 15th Oct.	200	16·5	67·0	38·6	10·5	4·9	0·5	17·5	34·5	19·0
	16th to 31st Oct.	220	35·0	57·0	23·2	20·1	8·4	0·5	7·7	43·2	60·2
	1st to 15th Nov.	168	46·0	54·5	30·2	24·9	14·0	1·8	17·2	65·0	78·5
	16th to 30th Nov.	114	52·6	61·1	37·3	32·2	19·3	0	20·2	72·8	92·1
4. Tahsil Mukatsar	1st to 15th Aug.	56	3·6	28·7	8·7	1·1	0·3	0	8·9	12·5	3·6
	16th to 31st Aug.	..	..	..	..	..	..	..	..	..	..
	1st to 15th Sept.	204	7·3	46·0	25·7	3·4	2·0	8·3	20·5	36·7	8·8
	16th to 30th Sept.	298	8·3	53·8	30·3	5·2	3·1	14·7	20·8	43·9	10·1
	1st to 15th Oct.	453	5·5	57·3	20·7	3·1	1·2	3·5	11·5	20·5	7·6
	16th to 31st Oct.	158	22·8	64·3	17·5	13·6	1·6	0	17·1	39·8	30·3

	1st to 15th Nov .	376	29 7	62 2	33 6	19 1	10 4	1 0	17 8	48 6	51 6
	16th to 30th Nov.	158	34 1	48 4	18 5	16 4	6 0	0	13 2	47 4	55 0
	1st to 15th Dec	143	49 6	55 1	23 7	27 7	12 1	1 4	16 7	67 1	90 2
	16th to 31st Dec	95	53 6	59 5	20 5	32 3	11 0	3 1	11 5	78 4	86 3
5. Tahsil Fazilka . .	1st to 15th Aug				.	.	..	..	..	..	..
	16th to 31st Aug	150	2 0	33 3	22 0	0 6	0 4	4 0	2 6	8 6	2 0
	1st to 15th Sept	319	2 9	42 8	22 5	1 1	0 6	7 5	4 4	14 7	2 9
	16th to 30th Sept	269	5 2	53 4	29 8	2 6	1 4	2 6	4 4	12 2	5 9
	1st to 15th Oct. .	503	3 8	53 9	26 6	3 9	1 0	2 0	7 5	13 3	3 8
	16th to 31st Oct	489	13 0	66 5	33 2	8 6	4 3	2 3	11 5	26 6	17 6
	1st to 15th Nov	479	25 0	53 2	21 4	14 1	5 4	2 0	10 4	37 5	34 2
	16th to 30th Nov	479	20 9	54 7	19 1	11 9	4 3	2 1	7 0	29 8	30 7
	1st to 15th Dec	292	39 0	61 0	23 2	23 3	9 2	4 7	7 8	51 7	73 6
	16th to 31st Dec	383	46 0	64 6	31 7	29 4	13 8	4 4	3 9	54 3	65 0
Total for District . .	1st to 15th Aug	495	16 0	60 0	31 3	9 9	5 1	1 0	11 5	28 5	19 4
	16th to 31st Aug	618	14 7	69 0	45 0	10 4	7 2	6 0	8 1	28 8	27 5
	1st to 15th Sept	1,199	12 1	69 1	42 7	8 4	5 3	6 3	16 0	34 4	15 2
	16th to 30th Sept	1,267	10 9	48 6	26 3	5 4	3 0	4 6	14 2	28 7	13 5
	1st to 15th Oct	1,773	10 2	65 6	37 5	6 6	3 8	1 9	12 6	29 7	14 2
	16th to 31st Oct	1,449	25 8	62 1	21 2	16 0	6 6	1 1	10 4	37 3	40 8
	1st to 15th Nov .	1,377	30 8	55 3	25 9	17 4	8 2	1 5	13 5	45 8	47 3
	6th to 30th Nov	1,288	33 5	60 2	24 2	21 0	8 6	1 0	9 2	43 9	57 8
	1st to 15th Dec .	732	46 0	61 8	26 9	28 1	12 1	3 4	9 3	58 6	76 2
	16th to 31st Dec	674	48 7	64 1	31 3	31 0	14 4	3 7	5 0	57 4	68 1
II. District Hissar.											
1. Tahsil Hissar . .	1st to 15th Aug .	48	22 9	57 6	27 6	14 3	7 2	0	41 7	64 6	31 3
	16th to 31st Aug	95	20 0	44 1	25 2	8 9	5 1	1 1	27 4	48 4	29 5
	1st to 15th Sept.	367	19 8	73 9	46 7	19 0	12 2	0 3	15 8	36 0	29 4
	16th to 30th Sept	370	15 7	68 3	34 6	10 7	5 6	1 6	15 0	32 2	21 1

TABLE V—*contd.*

Seasonal variation in the intensity of Bollworm attack in green bolls of Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925*—contd.

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM					Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing *signs* of Bollworm attack	Total of columns 4, 9 & 10	Number of Pink-Bollworms found per 100 bolls examined
			Per cent. bolls attacked	Per cent. loculi attacked	Per cent. seeds attacked	Absolute per cent o attacked loculi	Absolute per cent of attacked seeds				
1	2	3	4	5	6	7	8	9	10	11	12
II. DISTRICT HISSAR—*contd.* Tahsil Hissar—*contd.*	1st to 15th Oct. .	529	16·8	87·7	43·7	18·0	7·6	0·2	14·4	31·4	30·4
	16th to 31st Oct.	306	48·1	75·6	36·2	39·1	15·6	0·3	7·8	56·5	74·5
	1st to 15th Nov. .	419	35·1	80·5	28·6	21·1	10·2	1·4	10·3	46·8	60·9
	16th to 30th Nov.	278	48·2	67·7	25·3	31·8	13·1	2·5	11·9	62·6	74·5
	1st to 15th Dec. .	177	62·7	69·8	37·1	44·6	25·7	0	15·8	78·5	131·6
	16th to 31st Dec.	183	71·8	70·2	26·8	50·4	18·5	3·3	8·7	83·6	135·0
2. Tahsil Sirsa . .	1st to 15th Aug. .	121	8·2	56·6	33·5	4·3	2·1	4·9	0	13·1	10·7
	16th to 31st Aug.	196	7·6	62·5	38·1	4·7	2·7	3·5	29·5	40·8	13·2
	1st to 15th Sept.	..	..	..	..	..	..	..	..	..	..
	16th to 30th Sept.	189	6·3	45·0	23·0	3·0	1·4	0·5	3·1	10·0	6·3
	1st to 15th Oct. .	192	37·5	65·9	26·8	24·3	9·8	0	6·7	44·2	48·4
	16th to 31st Oct.	278	35·9	71·2	39·3	25·7	13·9	0·3	22·6	58·9	65·4
	1st to 15th Nov. .	348	29·6	56·4	34·5	16·5	8·8	0·2	18·3	48·2	43·1
	16th to 30th Nov.	186	39·2	78·9	30·2	32·4	12·6	1·0	8·6	48·9	60·7
	1st to 15th Dec. .	100	69·0	75·2	28·8	51·8	18·7	0	12·0	81·0	145·0
3. Tahsil Fatehabad .	1st to 15th Sept.	56	8·9	64·7	37·8	5·6	3·3	1·8	28·6	39·3	8·9
	16th to 30th Sept.	201	20·4	52·3	14·9	10·4	2·9	0·1	26·3	47·8	24·9

	1st to 15th Oct.	181	27.1	66.3	33.8	18.3	9.7	2.2	21.0	50·3	34.8
	16th to 31st Oct	116	34.5	82.9	48.9	26.7	15.5	10.3	16.4	61.2	39.7
	1st to 15th Nov	167	32.9	57.5	20.8	19.1	7.2	1.2	15.0	49.1	58.1
	16th to 30th Nov	173	34.1	74.0	34.4	26.0	12.1	0.6	13.3	48.0	47.4
4. Tahsil Bhawani	1st to 15th Sept	164	18.9	61.0	34.8	11.8	6·0	0.6	21.3	40.8	26.8
	16th to 30th Sept	262	15.6	62.1	37.6	8.3	5.4	1.1	17.1	34.0	16.8
	1st to 15th Oct	209	45.5	76.5	37.2	34.3	18.0	0	17.2	62.7	65.1
	16th to 31st Oct.	162	34.6	79.0	37.1	29.6	12.8	3.1	15.4	53.1	64.8
	1st to 15th Nov	268	44.8	67.7	28.9	30.2	12.8	0.7	14.6	60.1	71.3
	16th to 30th Nov	172	46.5	72.7	36.0	33.4	32.0	1.1	5.8	53.5	74.4
	1st to 15th Dec	131	55.0	70.9	53.6	36.0	31.8	3.1	3.1	61.1	79.4
	16th to 31st Dec	148	47.3	66.8	33.1	15.3	31.2	0·1	10.1	58.1	61.5
5. Tahsil Hansi	1st to 15th Aug.	54	1.9	66.7	33.3	1.1	0.6	3.7		5.6	1.9
	16th to 31st Aug	419	5.0	47.8	19.6	2.4	1.1	1.9	14.3	21.2	5.5
	1st to 15th Sept	161	5.5	48.2	17.7	2.6	1.0	0.6	6.2	12.4	5.5
	16th to 30th Sept.	253	7.1	58.6	22.0	4.1	1.2	1.9	11.0	20.1	7.5
	1st to 15th Oct.	785	17.8	54.2	28.4	9.3	4.5	0.8	9.9	28.5	21.7
	16th to 31st Oct	583	38.0	68.3	20.5	27.5	8.4	0.7	14.4	53.1	46.2
	1st to 15th Nov	584	30.0	56.1	25.0	16.9	7.2	1.0	8.9	39.9	44.5
	16th to 30th Nov	92	66.3	78.8	40.1	51.9	26.2	0	26.1	92.4	129.3
	1st to 15th Dec	605	53.7	66.5	33.1	35.8	18.2	1.5	10.4	65.6	101.8
	16th to 31st Dec.	250	79.2	72.2	34.5	56.8	27.2	0.3	2.0	82.0	152.4
Total for District	1st to 15th Aug	223	9.9	57.6	30.3	5.5	2.8	3.6	9.0	22.4	13·0
	16th to 31st Aug	710	7.7	50.3	26.3	4.4	2.1	2.3	20.3	30.3	10.8
	1st to 15th Sept	748	15.8	68.2	31.0	12.1	7.3	0.5	15.9	32.2	22·2
	16th to 30th Sept.	1,275	13.3	60.1	28.6	7.7	3.6	1.3	14.7	29.3	15·9
	1st to 15th Oct.	1,896	23.5	68.5	32.8	16.2	7.8	0.6	12.7	36.8	32.9
	16th to 31st Oct.	1,445	39.2	72.2	30.3	29.6	11.7	1·6	14.9	55.6	57.4

TABLE V—*contd.*

Seasonal variation in the intensity of Bollworm attack in green bolls of Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925*—contd.

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM Per cent. bolls attacked	Per cent loculi attacked	Per cent. seeds attacked	Absolute per cent of attacked loculi	Absolute per cent of attacked seeds	Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing signs of Bollworm attack.	Total of columns 4, 9 & 10	Number of Pink-Bollworms found per 100 bolls examined
1	2	3	4	5	6	7	8	9	10	11	12
II. DISTRICT HISSAR—*contd.*											
Total for District—*contd.*	1st to 15th Nov. .	1,686	35·6	63·4	27·9	20·0	9·0	1·0	13·2	49·8	56·5
	16th to 30th Nov.	901	45·2	73·4	33·4	33·1	17·3	1·3	11·8	58·3	72·0
	1st to 15th Dec. .	1,013	57·0	68·8	36·9	38 9	21·6	1·3	10·6	68·8	108·4
	16th to 31st Dec.	581	68·8	70·6	31·9	48·3	21·9	1·5	6·2	76·4	123·8
III. DISTRICT ROHTAK.											
1. Tahsil Rohtak . .	1st to 15th Sept.	399	18·0	68·7	43·9	12·4	8·7	0·5	21·5	40·1	29·8
	16th to 30th Sept.	479	12·3	70·0	37·4	8·1	4·6	1·6	21·7	35·6	13·9
	1st to 15th Oct. .	576	24·3	69·8	30·7	17·1	7·8	1·9	24·1	50·3	32·6
	16th to 31st Oct.	588	30·4	74·2	33·0	22·6	10·2	0·6	25·1	56·2	42·1
	1st to 15th Nov. .	230	50 4	75 0	35·1	37·0	17·8	2·6	22·6	75·6	83·9
	16th to 30th Nov.	350	49·7	66·0	31·9	32·9	15·8	0·5	19·1	69·4	77·7
	1st to 15th Dec. .	136	78 6	74·8	34·6	59·7	22·8	0	8·8	87·5	74·8
2. Tahsil Gohana . .	1st to 15th Aug. .	19	10·5	57·1	37·8	6·5	4·0	0	31·6	42·1	10·5
	1st to 15th Sept.	40	0	..	..	..	..	5·0	0	5·0	0
	16th to 30th Sept.	123	11·4	79·1	48·9	8·9	5·1	0·8	39·0	51·2	46·3
	1st to 15th Oct. .	187	29·4	68·6	26·1	20·0	7·3	3·7	33·7	66·8	36·9
	16th to 31st Oct.	197	35·5	67·3	24·4	24·1	9·0	2·0	9·1	46·7	46·7

	1st to 15th Nov. .	321	52·6	78·8	35·4	41·7	18·8	0·9	13·1	66·7	92·8
	16th to 30th Nov.	199	45·2	59·6	32·7	27·4	15·9	4·2	9·0	58·8	70·4
	1st to 15th Dec. .	47	34·0	60·0	28·9	21·9	11·9	2·1	25·5	61·7	59·6
3. Tahsil Sonipat . .	1st to 15th Sept.	58	10·3	61·1	25·8	6·2	2·7	12·1	31·0	53·4	10·3
	16th to 30th Sept.	84	16·7	77·8	39·4	13·5	7·1	11·9	11·9	40·5	19·0
	1st to 15th Oct. .	179	24·6	72·2	37·6	10·2	9·2	2·8	24·6	52·0	30 7
	16th to 31st Oct.	218	30·7	67·8	27·3	20·7	8·1	2·3	7·2	40·4	43·6
	1st to 15th Nov. .	195	29·2	50·2	22·3	14·4	6·8	2·6	3·1	34·9	37·4
	16th to 31st Nov.	30	43·3	59·0	27·8	25·3	11·7	6·7	16·7	66·7	70·0
	1st to 15th Dec. .	44	22·7	40·6	21·7	19·2	4·8	0	29·5	52·3	25·0
4. Tahsil Jhajjar . .	1st to 15th Sept.	100	35·0	53·1	22·1	18·8	7·9	0	11·0	46·0	40·0
	16th to 30th Sept.	258	18·2	47·2	19·3	11·7	6·0	0	17·1	35·3	21·7
	1st to 15th Oct. .	251	27 1	72 6	29·9	20·4	9·4	2·4	19·1	48·6	35·9
	16th to 31st Oct.	198	34·3	61·7	26 8	21·3	9·3	3·0	14·6	52·0	45·5
	1st to 15th Nov. .	80	55·0	76·2	26·6	42·2	13·4	1·3	37·5	93·8	140·0
Total for District . .	1st to 15th Aug. .	19	10·5	57 1	37·8	6·5	4·0	0	31·6	42·1	10·5
	1st to 15th Sept.	597	18·9	63·4	36 2	12·9	7·9	1·8	19·2	40·0	27·6
	16th to 30th Sept.	944	14·1	61·8	32·1	9·7	5·2	2·0	21·8	38·0	20·7
	1st to 15th Oct. .	1,193	25·7	70·6	30·6	21·8	8·3	2·4	24·6	52·8	33·6
	16th to 31st Oct.	1,201	31·9	69·6	29 3	22·2	9·4	1·5	17·5	51·1	43·7
	1st to 15th Nov. .	826	46·7	73·2	32·5	34·1	15·4	1·8	15·7	64·2	82·4
	16th to 30th Nov.	579	47·8	57·2	32·2	30·7	15·6	2·2	15·5	65·6	74·7
	1st to 15th Dec. .	227	58·5	70·6	32·9	42·6	19·6	0·4	16·2	75·3	105·7
IV. District Gurgaon.											
1. Tahsil Gurgaon . .	16th to 30th Sept.	261	22 6	80·3	32 5	18·1	7 7	1·1	29·1	52·9	32·6
	1st to 15th Oct.	..	..	..	..	..	..	..	..	..	..
	16th to 31st Oct.	90	18·9	82·4	20·3	15·1	3·7	3·3	13·3	35·6	27·4
	1st to 15th Nov.	165	52·1	63·5	32·6	33·3	17·7	1·2	20·6	73·9	98·3

TABLE V—*contd.*

Seasonal variation in the intensity of Bollworm attack in green bolls of Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925*—contd.

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM					Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing *signs* of Bollworm attack	Total of columns 4, 9 & 10	Number of Pink-Bollworms found per 100 bolls examined
			Per cent. bolls attacked	Per cent. loculi attacked	Per cent. seeds attacked	Absolute per cent. of attacked loculi	Absolute per cent. of attacked seeds				
1	2	3	4	5	6	7	8	9	10	11	12
IV. DISTRICT GURGAON—*contd.*											
1. Tahsil Gurgaon—*contd.*	16th to 30th Nov.	100	77·0	77·0	44·6	58·7	34·7	0	12·0	89·0	227·0
	1st to 15th Dec.	225	65·8	65·2	31·6	43·2	20·7	0	10·2	76·0	133·3
	16th to 31st Dec.	57	78·9	69·8	40·0	55·9	30·9	0	5·3	84·2	96·5
2. Tahsil Nuh . .	16th to 30th Sept.	116	37·1	63·8	32·4	23·2	13·2	0	23·3	60·3	47·4
	1st to 15th Oct.	173	14·5	82·1	31·0	12·4	4·9	2·9	32·4	49·7	36·4
	16th to 31st Oct.	161	31·1	75·7	31·7	22·5	10·2	0·6	18·6	50·3	59·0
	1st to 15th Nov.	341	26·1	61·8	24 5	16·0	6·3	3·5	13·5	43·1	53·1
	16th to 30th Nov.	233	24·5	84·9	33·0	23·2	8·6	0·9	9·4	34·8	31·8
	1st to 15th Dec.	216	56·9	79·0	36·7	43·5	20·4	3·2	6·5	66·7	122·2
	16th to 31st Dec.	40	62·5	52·6	26·9	32·0	16·0	22·5	12·5	97·5	92·5
3. Tahsil Ferozpur-jharka.	1st to 15th Oct.	231	18·6	61·8	32·6	11·5	5·4	0·9	14·3	33·8	31·2
	16th to 31st Oct.	277	20·9	79·5	34·8	16·6	7·2	2·5	16·2	39·7	37·6
	1st to 15th Nov.	268	49·6	84·1	56·2	41·9	29·0	2·2	21·6	73·5	115·0
	16th to 30th Nov.	85	72·9	73·5	38·7	57·3	29·1	2·4	11·8	87·1	172·9
	1st to 15th Dec.	100	70·0	74·8	29·6	52·1	20·1	0	15·0	85·0	176·0
	16th to 31st Dec.	82	90·2	72·4	28·2	65·4	25·6	1·2	8·5	100·0	146·3

4. Tahsil Rewari . .	16th to 30th Sept.	92	1·1	100·0	19·0	1·1	0·2	0	2·2	3·3	2·2
	1st to 15th Oct.	100	11·0	92·1	35·9	9·8	3·8	3·0	40·0	54·0	20·0
	16th to 31st Oct.	113	1·8	28·6	18·5	0·3	0·2	0	0	1·8	1·8
	1st to 15th Nov.	175	34·3	79·6	31·4	27·1	11·2	4·6	19·4	58·8	60·0
	16th to 30th Nov.	124	4·8	42·1	23·0	2·1	1·1	3·2	21·0	29·0	5·6
	1st to 15th Dec.	189	13·8	55·4	32·0	7·6	4·2	2·1	19·0	34·9	17·5
5. Tahsil Palwal . .	16th to 30th Sept.	35	11·4	41·7	30·0	4·5	3·3	0	14·3	25·7	11·4
	1st to 15th Oct.	98	11·2	51·5	20·7	5·6	2·7	3·1	19·4	33·7	14·2
	16th to 31st Oct.	251	19·9	73·4	45·5	14·3	8·3	1·9	27·9	49·8	33·9
	1st to 15th Nov.	284	25·4	55·6	31·2	14·3	7·8	2·1	16·9	44·4	35·6
	16th to 30th Nov.	297	29·6	64·8	32·6	18·8	9·6	0·3	10·1	40·1	54·5
	1st to 15th Dec.	42	26·2	54·3	32·4	14·6	9·1	0	21·4	47·6	57·1
	16th to 31st Dec.	67	7·5	60·0	29·9	4·3	2·1	0	6·0	13·4	8·9
Total for the District .	16th to 30th Sept.	504	21·0	72·2	32·3	15·3	7·5	0·6	21·8	43·6	29·0
	1st to 15th Oct.	602	15·0	70·1	30·9	10·5	4·6	2·2	24·6	41·7	28·1
	16th to 31st Oct.	892	19·8	69·2	35·3	14·8	6·8	1·8	17·6	39·2	34·8
	1st to 15th Nov.	1,233	35·7	87·6	37·7	25·0	13·7	2·8	17·8	56·3	66·5
	16th to 30th Nov.	849	34·2	74·8	37·3	26·0	13·4	1·1	11·8	47·0	72·7
	1st to 15th Dec.	772	49·0	70·3	32·9	34·1	16·1	1·4	12·6	63·0	103·2
	16th to 31st Dec.	246	60·7	70·0	31·6	41·4	18·9	4·1	7·7	72·4	88·7
V; DISTRICT KARNAL.											
1. Tahsil Karnal . .	1st to 15th Sept.	199	6·0	40·0	16·4	2·8	1·0	1·5	15·6	23·1	7·0
	16th to 30th Sept.	236	33·1	78·5	43·1	24·5	14·7	0·8	19·8	53·8	51·7
	1st to 15th Oct.	187	13·5	67·5	44·2	9·8	6·2	0	22·9	36·4	15·0
	16th to 31st Oct.	100	46·0	65·9	29·7	31·9	14·4	1·0	15·0	62·0	55·0
	1st to 15th Nov.	205	37·1	67·6	31·8	25·1	11·2	1·5	8·8	47·3	54·6
	16th to 30th Nov.	246	35·4	58·5	19·5	17·7	6·6	1·2	21·1	57·7	46·7
	1st to 15th Dec.	263	54·0	68·0	33·8	37·1	19·5	1·1	14·4	69·6	80·6
	16th to 31st Dec.	109	90·8	54·2	18·5	49·1	16·8	2·8	0	93·6	15·5

TABLE V—*concld.*

Seasonal variation in the intensity of Bollworm attack in green bolls of Desi *cottons, in the South-eastern Punjab, during August to December, 1924 and 1925*—contd.

District and Tahsil	Date of taking sample (year 1924 and 1925)	Number of bolls examined	PINK-BOLLWORM: Per cent. bolls attacked	PINK-BOLLWORM: Per cent loculi attacked	PINK-BOLLWORM: Per cent. seeds attacked	PINK-BOLLWORM: Absolute per cent. of attacked loculi	PINK-BOLLWORM: Absolute per cent. of attacked seeds	Per cent. bolls attacked by Spotted Bollworms	Per cent. bolls showing *signs* of Bollworm attack	Total of columns 4, 9 & 10	Number of Pink Bollworms found per 100 bolls examined
1	2	3	4	5	6	7	8	9	10	11	12
V. DISTRICT KARNAL—*contd.*											
2. Tahsil Thanesar .	1st to 15th Sept.	220	6·8	52·1	51·5	3·7	3·1	4·1	8·2	19·1	10·5
	16th to 30th Sept.	252	2·8	65·2	27·6	2 9	0·9	0·8	17·5	21·0	3·2
	1st to 15th Oct.	269	13·0	54·1	31·4	7·1	4·7	1·1	2·0	37·1	18·6
	16th to 31st Oct.	265	23·4	65 3	25·9	15·6	6·8	0·4	18·2	42·6	34·3
	1st to 15th Nov.	261	36·0	69·9	33·3	25·7	8·3	2·3	11·9	50·2	62·3
	16th to 30th Nov.	192	24·0	47·0	21·2	11·5	5·2	4·7	21·9	50·5	29·7
	1st to 15th Dec.	146	53·4	61·6	17·9	32·3	9·3	2·1	17·1	72·6	87·0
	16th to 31st Dec.	50	82·0	83·1	48·3	67·8	37·7	0	4·0	86·0	14·0
3. Tahsil Kaithal .	1st to 15th Sept.	100	7·0	42·3	20·8	3·4	1·9	0	5·0	12·0	7·0
	16th to 30th Sept.	100	29·0	83·7	30·0	25·3	9·0	3·0	22·0	54·0	43·0
	1st to 15th Oct.	75	41·0	80·0	26·3	32·5	11·0	5·3	28·0	74·6	68·0
	16th to 31st Oct.	100	41·0	84·5	47·2	33·9	19·4	0	37·0	78·0	92·0
	1st to 15th Nov.	285	69·5	76·2	38·1	52·6	27·4	1·4	4·2	75·1	129·5
	16th to 30th Nov.	97	56·7	66·3	22·1	38·0	13·1	0	28·2	84·9	109·3
	1st to 15th Dec.	166	78·9	68·7	25·8	54·1	28·9	0	5·4	84·3	141·0
	16th to 31st Dec.	128	85·2	68·3	30·3	58·4	25·9	0·8	0	86·0	165·6

Tahsil Panipat . .	16th to 30th Sept.	150	37·3	68·3	40·1	24·8	14·3	1·3	26·0	64·7	70·7
	1st to 15th Oct .	134	9·7	48·8	30·5	4·7	2·9	1·5	22·4	33·6	13·4
	16th to 31st Oct	151	43·6	55·1	22·5	25·2	10·5	4·0	12·5	62·3	71·5
	1st to 15th Nov .	101	54·5	61·1	34·0	33·3	17·6	1·0	17·8	73·2	88·1
	16th to 30th Nov	259	68·0	68·4	34·1	49·7	23·5	1·9	5·4	75·3	111·6
	1st to 15th Dec .	156	68·9	71·4	46·3	50·0	31·7	2·7	12·9	84·6	147·4
Total for District . .	1st to 15th Sept	519	6·6	45·6	8·0	3·2	2·0	2·4	10·4	19·5	8·5
	16th to 30th Sept	738	23·0	53·5	52·6	17·1	9·8	1·2	20·6	44·8	37·8
	1st to 15th Oct .	665	15·6	58·0	32·6	9·3	5·4	1·3	23·5	40·4	31·0
	16th to 31st Oct	616	35·4	65·6	29·3	23·7	11·3	1·3	19·6	56·4	56·2
	1st to 15th Nov	852	49·6	71·2	35·8	35·4	16·1	1·6	9·2	60·5	87·2
	16th to 30th Nov	794	35·8	63·6	27·8	29·5	13·3	2·1	17·0	65·0	71·4
	1st to 15th Dec .	671	63·4	67·9	32·2	42·8	20·5	1·5	13·6	83·6	121·1
	16th to 31st Dec	287	86·7	65·1	14·4	56·5	23·5	1·3	0·6	88·8	155·4
Total for Region . .	1st to 15th Aug .	737	10·0	59·4	31·2	8·4	4·4	1·7	11·3	23·0	17·2
	16th to 31st Aug	1,328	11·0	61·9	40·2	7·3	4·5	3·9	14·6	29·6	18·6
	1st to 15th Sept .	3,063	13·3	65·3	39·6	9·1	5·7	3·4	15·6	32·4	18·2
	16th to 30th Sept	4,728	15·2	63·1	34·1	9·7	5·1	2·2	17·7	35·1	20·7
	1st to 15th Oct. .	6,129	18·2	67·8	32·9	12·8	6·9	1·6	17·3	37·2	25·9
	16th to 31st Oct .	5,603	30·7	68·8	26·8	21·6	9·1	1·5	15·3	47·4	46·4
	1st to 15th Nov. .	5,974	38·1	68·9	31·7	24·8	11·6	1·7	14·0	53·6	64·8
	16th to 30th Nov.	4,411	40·1	65·6	30·3	27·1	14·0	1·4	12·5	54·1	68·2
	1st to 15th Dec .	3,415	55·1	67·7	32·9	36·6	17·8	1·8	11·7	68·6	111·4
	16th to 31st Dec.	1,788	62·9	67·0	25·4	42·0	18·8	2·9	5·0	70·7	103·0

TABLE VI.

Number of Pink-Bollworms found per attacked green boll of Desi *cottons.*

Dates (1924)	Number of samples examined	Number of bolls examined	Percentage of bolls attacked by Pink Bollworm	PERCENTAGE OF BOLLS ATTACKED BY 1 TO 10 PINK BOLLWORMS									
				1 larva	2 larvae	3 larvae	4 larvae	5 larvae	6 larvae	7 larvae	8 larvae	9 larvae	10 larvae
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1st to 15th Aug. . .	3	241	2·5	100 0	..	..	..	..	..	..	..	..	..
16th to 31st Aug. . .	8	728	5 4	94·9	5·1	..	..	..	..	..	..	..	..
1st to 15th Sept. .	14	1,218	11 5	85 0	10·7	2 1	1·4	0·7	..	..	..	..	..
16th to 30th Sept. .	9	842	12·7	88 8	8·4	1·9	0·9	..	..	..	..	..	..
1st to 15th Oct. . .	17	2,000	14·9	83 9	13·4	2·4	0·3	..	..	..	..	..	..
16th to 31st Oct. .	15	2,026	36 2	75 3	17 2	5·6	1·5	0 1	0·3	..	..	..	..
1st to 15th Nov. .	20	2,311	34·4	59·1	25·5	8 9	4 0	1·4	0·5	0·1	0·4	0	0·1
16th to 30th Nov. .	18	2,091	47·5	55 5	27·3	12 2	3·7	0·9	0·2	..	..	0·1	..
1st to 15th Dec. .	19	1,734	66·4	46 7	32·2	12·9	5·1	2·4	0·2	0·2	0·1	0·1	..
16th to 31st Dec. .	18	1,599	67·5	55 1	31·2	9·6	2·9	0·8	0·3	..	..	..	..

TABLE VII.

Number of loculi attacked and Pink-Bollworms found per attacked loculus of green boll of Desi *cottons.*

Dates (1924)	Number of samples	Number of bolls examined	Number of attacked bolls	No. of loculi damaged in attacked bolls	Percentage of attacked loculi showing						Percentage of attacked bolls with		
					signs of attack	1 larva	2 larvae	3 larvae	4 larvae	5 larvae	1 damaged loculus	2 damaged loculus	3-4 damaged loculus
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1st to 15th Aug. . .	3	241	6	10	40 0	60·0	..	..	..	..	50 0	33·3	16·7
16th to 31st Aug. . .	8	728	39	59	30 5	69 5	..	..	..	..	61·5	28 3	10·3
1st to 15th Sept. .	14	1,218	140	280	39·6	59·6	0 7	..	..	..	41·5	26·4	32·1
16th to 30th Sept. .	9	842	107	21[illegible]	45·4	52·8	1 8	..	..	..	35·5	31·8	32·7
1st to 15th Oct. . .	17	2 000	298	702	50·4	48·1	1·5	..	..	..	18·4	31·9	49·7
16th to 31st Oct. . .	15	2,026	735	1,642	42·4	55 2	2 2	0 2	..	..	22·7	34·0	43·3
1st to 15th Nov. .	20	2,311	796	1,740	30 6	61 2	7 1	0 9	0 1	0 1	18 0	41·7	40·2
16th to 30th Nov. .	13	2,091	994	2,370	35·6	58 8	4 9	0 6	0 1	..	20·3	31·8	47·8
1st to 15th Dec. .	19	1,731	1,151	2,584	25 9	66·1	7·1	0 8	0 1	..	22 1	36 5	41·4
16th to 31st Dec. .	18	1,599	1,079	2,309	28 1	67·6	4·0	0·3	..	..	24 7	40 2	35·2

Table VIII.

Intensity of Pink-Bollworm attack in kapas *of different pickings of* kharif, *1924.*

Region	Variety of cotton	Picking	Weight in tolas of *kapas* examined	Number of Pink-Bollworms found	Number of Pink-Bollworms calculated per 100 tolas of *kapas*
1	2	3	4	5	6
I. South-eastern Punjab . .	*Desi* . . .	Early . .	795	2,449	308
		Middle . .	876	3,193	364
		Late . .	971	4,817	496
		TOTAL .	2,642	10,459	39[illegible]
	American . .	Early . .	102	71	69
		Middle . .	128	152	119
		Late . .	106	193	183
		TOTAL .	336	416	124
	TOTAL .	Early . .	897	2,520	281
		Middle . .	1,007	3,345	333
		Late . .	1,077	5,010	465
		TOTAL .	2,978	10,875	365
II. Eastern Punjab . .	*Desi* . . .	Early . .	1,412	2,389	169
		Middle . .	1,362	2,063	151
		Late . .	1,415	2,982	211
		TOTAL .	4,189	7,434	177
	American . .	Early . .	140	373	266
		Middle . .	200	400	200
		Late . .	180	396	220
		TOTAL .	520	1,169	225
	TOTAL .	Early . .	1,552	2,762	178
		Middle . .	1,562	2,463	158
		Late . .	1,595	3,378	212
		TOTAL .	4,709	8,603	183
III. Central Punjab . .	*Desi* . . .	Early . .	324	238	73
		Middle . .	371	269	72
		Late . .	354	435	124
		TOTAL .	1,049	942	90

TABLE VIII—*contd.*

Intensity of Pink-Bollworm attack in kapas *of different pickings of* kharif *1924*—contd.

Region	Variety of cotton	Picking	Weight in tolas of *kapas* examined	Number of Pink Bollworms found	Number of Pink Bollworms calculated per 100 *tolas* of *kapas*
1	2	3	4	5	6
	American . .	Early . .	262	125	55
		Middle . .	265	137	52
		Late . .	160	53	33
		TOTAL .	687	315	46
	TOTAL .	Early . .	586	363	62
		Middle . .	636	406	64
		Late . .	514	488	95
		TOTAL .	1,736	1,257	72
IV. Northern Area . . .	*Desi*	Early . .	418	153	37
		Middle . .	510	114	22
		Late . .	426	253	59
		TOTAL .	1,355	520	38
	American . .	Early . .	47	2	4
		Middle . .	20	0	0
		Late . .	20	1	5
		TOTAL .	87	3	3
	TOTAL .	Early . .	466	155	33
		Middle . .	530	114	21
		Late . .	446	254	57
		TOTAL .	1,442	523	36
V. Western Punjab including the Colony areas.	*Desi*	Early . .	1,935	192	10
		Middle . .	2,177	233	11
		Late . .	1,955	274	14
		TOTAL .	6,067	699	12
	American . .	Early . .	1,615	151	9
		Middle . .	1,938	188	9
		Late . .	1,508	152	10
		TOTAL .	5,061	491	10
	TOTAL .	Early . .	3,550	343	10
		Middle . .	4,115	421	10
		Late . .	3,463	426	12
		TOTAL .	11,128	1,190	11

Table IX.

Pink-Bollworms resting in cotton-lint and cotton-seeds.

Kind of cotton	Material collected during *kharif* 1923 or 1924*	Number of samples examined	Total Pink-Bollworms found	Lint (Free or in silken cocoons)	Number of Pink-Bollworms found in Seed-chambers: 1-seeded	2-seeded	3-seeded	4-seeded	5-seeded
Desi	1923	118	5,262	405	487	3,148	991	191	40
	1924	627	19,869	1,516	752	12,144	3,861	1,181	415
Total .	..	745	25,131	1,921	1,239	15,292	4,852	1,372	455
American	1923	29	1,288	72	117	842	208	41	8
	1924	211	2,236	118	142	1,453	377	110	36
Total .	.	240	3,524	190	259	2,295	585	151	44
Percentage of caterpillars in lint and seed-chambers—									
Desi	1923	118	99·9	7·7	9·3	59·8	18·8	3·5	0·8
	1924	627	100	7·7	3·8	61·1	19·4	5·9	2·1
Total .	..	745	100	7·7	4·9	60·9	19·3	5·4	1·8
American	1923	29	100	5·6	9·1	65·4	16·1	3·2	0·6
	1924	211	99·9	5·3	6·3	65·0	16·8	4·9	1·6
Total .	..	240	99·9	5·4	7·3	65·1	16·6	4·3	1·2

* Samples of *kharif* 1923, were examined during January to March, 1924, and those of *kharif* 1924, during January to March, 1925.

Table X.

Half-monthly totals of emergences of long-cycle moths of Platyedra gossypiella; Saund., from kapas *of different pickings of* kharif *1923, and 1924.*

Date of emergence of moths (1924 and 1925)	Number of moths emerged from *kapas* of different pickings								Total
	Early pickings		Middle pickings		Late pickings		Mixed pickings		
	1923*	1924**	1923	1924	1923	1924	1923	1924	
April— 1st to 15th		1	4	1	1	4	5	6	11
16th to 30th	2	13	10	16	3	15	15	44	59
May— 1st to 15th	1	37	8	42	6	47	15	126	141
16th to 31st	1	49	6	86	8	51	15	186	201
June— 1st to 15th		10		17		25	0	62	52
16th to 30th		56	9	62	4	148	13	266	27)
July— 1st to 15th	4	123	51	175	8	301	63	599	662
16th to 31st	10	69	164	80	75	253	249	402	651
August— 1st to 15th	13	56	139	98	74	164	226	318	544
16th to 31st	2	16	17	18	4	31	23	65	88
September— 1st to 15th	1		2	1	3	1	6	2	8
16th to 30th			1				1	..	1
October— 1st to 15th				1				1	1
16th to 31st	.			.				.	..
November— 1st to 15th		.	1				1	.	1
16th to 30th					..		..	..	..

*Samples of *kharif* 1923, were examined from 15th December, 1923, to 15th March, 1924, and the moths emerged during April, 1924, to September, 1924.

**Samples of *kharif*, 1924, were examined from 1st January, 1925, to 31st March, 1925, and the moths emerged during April, 1925, to November, 1925.

TABLE X—*contd.*

Half-monthly totals of emergences of long-cycle moths of Platyedra gossypiella, Saund, *from* kapas *of different pickings of* kharif *1923, and 1924*—contd.

Date of emergence of moths (1924 and 1925)	Number of moths emerged from *kapas* of different pickings								Total
	Early pickings		Middle pickings		Late pickings		Mixed pickings		
	1923*	1924**	1923	1924	1923	1924	1923	1924	
Calculated as 1,000 emergences.									
April—									
1st to 15th	..	2	10	2	15	3	8	3	4
16th to 30th	59	30	24	28	16	15	24	21	22
May—									
1st to 15th	29	86	18	70	32	46	24	61	52
16th to 31st	29	116	16	143	43	49	24	90	75
June—									
1st to 15th	..	2	..	28		24		25	20
16th to 30th	.	23	22	104	21	142	21	129	104
July—									
1st to 15th	118	130	125	293	43	290	100	290	245
16th to 31st	294	285	398	134	403	243	394	195	241
August—									
1st to 15th	382	160	337	164	398	158	358	154	201
16th to 31st	59	130	41	30	21	30	36	31	38
September—									
1st to 15th	30	36	5	2	18	.	9	1	4
16th to 30th	..	..	2	.	..	..	2	..	..
October—									
1st to 15th	.	..	..	2	..	..	..	..	.
16th to 31st	..	.	..	..	..	.	..	..	..
November—									
1st to 15th	..	..	..	2	..	..	..	..	.
16th to 30th	..	..	..	..	..	..	..	..	..

* Samples of *kharif* 1923, examined from 15th December, 192 , to 15th March, 1924, and the moths emerged during April, 1924, to September, 1924.
**Samples of *kharif*, 1924, were examined from 1st January, 1925, to 31st March, 1925, and the moths emerged during April, 1925, to November, 1925.

TABLE XI.

Emergence of long-cycle moths from caterpillars resting in cotton-lint and seeds.

Description	Number of Pink-Bollworms kept under observation (Approximate)	NUMBER OF MOTHS EMERGED												Total	Percentage of Pink-Bollworms which reached the moth stage
		April		May		June		July		August		September			
		1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	1-15	16-30		
I. Pink-Bollworms resting in cotton lint.	1,113	4	12	13	9	..	.	3	13	6	1	..	.	61	5·4
II. Pink-Bollworms resting in cotton-seeds—															
(a) In 1 or 2 seeded resting-chambers.	2,633	1	2	4	3	3	10	42	169	164	18	4	1	421	15·9
(b) In 3 to 5 seeded resting-chambers.	626	0	1	2	2	0	4	15	63	52	5	3	1	148	23·6
TOTAL .	3,259	1	3	6	5	3	14	57	232	216	23	7	2	569	17·4
Calculated as 1,000 emergences.															
I. Pink-Bollworms resting in cotton lint	.	66	197	213	147	0	0	49	213	98	16	0	0	999	..
II. Pink-Bollworms resting in cotton seeds—															
(a) In 1 or 2 seeded resting-chambers.	..	2	5	9	7	7	24	100	402	389	43	9	2	999	..
(b) In 3 to 5 seeded resting-chambers.	..	0	7	13	13	0	27	101	426	351	34	20	7	999	..
TOTAL .	..	2	5	11	10	5	25	100	408	380	40	12	4	1,002	..

TABLE XII.

Half-monthly totals of emergences of moths (short and long-cycle) of Platyedra gossypiella, Saund, *from green bolls of* kharif, *1924.*

Date of emergence of moths (1924 and 1925)	DATE OF TAKING SAMPLE (YEAR 1924)																Emergence of Long-cycle moths calculated as 1,000	
	September				October				November				December			Total		
	1-7	8-15	16-23	24-30	1-7	8-15	16-23	24-31	1-7	8-15	16-23	24-30	1-7	8-15	16-23	24-31		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
September—																		
1st to 15th	4	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16th to 30th	26	1	51	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..
October—																		
1st to 15th	..	12	30	33	9	..	..	..	..	..	..	..	..	..	..	..	..	..
16th to 31st	..	..	6	43	52	38	1	..	..	..	..	..	..	..	..	..	..	..
November—																		
1st to 15th	..	..	..	..	.	78	10	8	..	..	..	..	..	..	..	..	..	..
16th to 30th	..	..	.	..	1	4	13			.	.	..	..	..	..	..	..	..
December—																		
1st to 15th	..	.	..	.	.	14	21	12	9	..	2	..	.	..	..	..	..	..
16th to 31st	..	..	..	..		.	3	7	6	6	..	..	.	..	..	..	..	..
January—																		
1st to 15th	..	..	..	.	..	.		5	20	4		..	..	..	..	..	..	..
16th to 31st	..	..	.	..	..	.	..	..		2	..	..	..	..	..	..	..	..
February—																		
1st to 15th	..	..	..	..	..	..	..	..	..	..		..	.	..	..	..	..	..
16th to 29th	..	..	..	..	.	.	..	.	..	..	..	.	..	..	–	–	..	..

March—																		
1st to 15th	.	..	..	.	.	..	.	..	..	.	..	..	..	..	..	..	..	..
16th to 31st	..	..	..	..	.	.		.	..	..	..	..	..	..	2	2	4	3
April—																		
1st to 15th	..	..	..	..	..	.	..	9	10	4	13	7	14	5	14	2	78	54
16th to 30th	..	..	..	.	.	2	.	10	12	14	14	5	27	9	24	2	117	81
May—																		
1st to 15th	..	..	..	.	.	.	1	13	13	13	13	10	28	13	27	3	135	93
16th to 31st	.	.	.		.			24	8	19	7	3	41	23	23	12	161	111
June—																		
1st to 15th	..	.	.		..			16	10	11	12	8	10	9	9	1	86	59
16th to 30th	.	..	.	.		.		20	16	23	43	22	44	35	23	7	233	161
July—																		
1st to 15th	—	.						31	23	37	44	33	93	46	40	14	361	250
16th to 31st	.	.			.	1	1	7	6	12	22	10	86	9	34	8	196	135
August—																		
1st to 15th		.						5	1	7	5	6	37	1	9	1	73	51
16th to 31st	.	.	.		.	1	1					1				..	[illegible]	2
Short-cycle moths (September 1924 to January 1925).	30	1	87	76	62	134	48	32	35	12	2	..	.	.	..	..	..	..
Long-cycle moths (March 1925 to August 1925)	.	.			..	4	3	135	99	140	173	105	383	150	202	53	..	..
Calculated as 100 emergences from each week collection—																		
Long-cycle moths	100	100	100	100	100	97	94	19	26	8	1	..	..	..	.		..	..
Short-cycle moths	.			..	..	3	6	81	74	92	99	100	100	100	100	100	..	..

TABLE XIII.

Resting period of Pink Bollworm in green bolls.

Number of weeks for which Pink-Bollworm rested	DATE OF TAKING SAMPLE (1924)											TOTAL
	OCTOBER			NOVEMBER				DECEMBER				
	8-15	16-23	24-31	1-7	8-15	16-23	24-30	1-7	8-15	16-23	24-31	
12	..	..	..	..	..	..	..	..	..	..	2	2
13	..	..	..	..	..	..	..	..	..	2	1	3
14	..	..	..	..	..	..	..	..	..	9	1	10
15	..	..	..	..	..	..	..	..	4	5	1	10
16	..	..	..	..	..	..	..	10	1	9	1	21
17	..	..	..	..	..	..	4	4	3	15	..	26
18	..	..	..	..	..	9	3	14	6	12	3	47
19	..	..	..	..	4	4	3	13	3	15	5	47
20	..	..	..	10	..	10	2	3	10	20	7	62
21	..	..	4	..	7	4	3	25	13	3	1	60
22	..	..	5	8	7	5	7	27	10	..	..	69
23	..	..	4	4	4	8	3	14	2	9	5	53
24	..	..	6	1	9	7	..	3	7	17	2	52
25	..	..	1	12	13	..	..	7	13	6	5	57
26	..	..	12	8	6	..	8	19	22	19	9	103
27	1	..	17	..	..	12	5	25	21	21	2	104
28	1	..	7	1	11	15	17	15	25	13	6	111
29	..	1	1	9	11	28	17	78	4	21	1	161
30	..	..	15	8	12	25	16	26	5	6	1	114
31	..	..	4	8	21	19	7	60	1	3	..	123
32	..	..	16	11	16	11	3	26	..	..	..	83
33	..	..	16	12	6	11	6	11	..	..	..	62
34	..	..	15	3	6	3	..	..	..	..	..	31
35	..	..	3	3	1	2	1	..	..	..	..	10
36	..	..	4	1	6	..	..	..	..	..	..	11
37	1	..	1	..	..	..	..	..	..	..	..	2
38	..	1	4	..	..	..	..	..	..	..	..	5
39	..	1	..	..	..	..	..	..	..	..	..	1
40	1	..	..	..	..	..	..	..	..	..	..	1

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Exot. Micr. III 370 : type *haemanthes*, M. (Texas).

Oec. Acropogona, Sodoffsky 1837. (ANCHINIA, Hubner).
Bull. Mosc. X, No. 6, p. 95 : type *daphnella*, Hb. (Europe).

Tortr. ACROPOLITIS, Meyr. 1881.
P. Linn. Soc. N. S. W. VI 432-433 : type *magnana*, Wlk. (N. S. Wales).
|| Thrincophora, Meyr. 1881.

Schreck. ACTINOSCELIS, Meyr. 1912.
Exot. Micr. I 59 : type *irina*, M. (India).

Tin. Acureuta, Zeller 1877. (TIQUADRA, Wlk.).
H. S. E. R. XIII 198-199 : type [*aritella*, Wlk.—] *aspera*, Z. (C. S., and Ins. America).

Aluc. Adactyla, Zeller 1841. (AGDISTIS, Hb.).
Isis 1841. 770 : type *adactyla*, Tr. (Europe).

Aluc. Adactylus, Curtis 1833. (AGDISTIS, Hb.).
Brit. Entom. X, expl. t. 471 : type *bennetii*, Curtis. (England).

Aluc. ADAINA, Meyr. 1910.
Wyts. Gen. Ins., fasc. 100, p. 15 : type *microdactyla*, Hb. (Europe).
Adaina, Tutt, Ent. Rec. XVII 37 (1905) (*non-descr.*).

Adel. ADELA, Latreille 1802.
Hist. Nat. Crust. Ins. III 417 : type *reaumurella*, L. [=*viridella*, Scop.] (Europe).
Adela, Latr., Précis caract. Ins., p. 147 (1796) (Invalid : no associated species).
|| Nemotois, Hb. 1826.
|| Capillaria, Hw. 1828.
|| Metallitis, Sodoffsky 1837.
|| Cauchas, Zeller 1839.
|| Aedilis, Gistel 1848.
|| Dicte, Chambers 1873.

Gel. ADELOMORPHA, Snellen 1885.
Tijds. Ent. XXVIII 31 : type *ritsemae*, Snell. (Celebes : Ceram).

Eucosm. ADENONEURA, Walsingham 1907.
Faun. Hawaii. I 677 : type *falsifalcellum*, Wlsm. (Hawaii).

Aeg. ADIXOA, Hampson 1893.
Faun. Ind., Moths I 198, f. 125 : type *alterna*, Wlk. (S. India).

Aeg. ADIXOANA, Strand 1913.
Arch. Naturg. LXXVIII. A. 12, p. 69 : type *auripuga*. Strand (Cameroons).

Aluc. Adkinia, Tutt. 1906. (STENOPTILIA, Hb.).
Brit. Lep. V 318-319 : type *bipunctidactyla*, Hw. (Europe).
Adkinia, Tutt, Ent. Rec. XVII 37 (1905) (*non-descr.*).

Tortr. ADOXOPHYES, Meyr. 1881.
P. Linn. Soc. N. S. W. VI 429 : type *heteroidana*, M. (Queensland).

Gel. Adrasteia, Chambers 1872. (TELPHUSA, Chamb.).
Canad. Entom. IV 149-150, 206-207 : type *alexandriacella*, Chamb. (N. America).

Glyph. Adricara, Walker 1863. (IMMA, Wlk.).
Cat. XXVII. 114 : type *albodiscata*, Wlk. (Brazil).

Cosm. Aeaea, Chambers 1874. (CHRYSOPELEIA, Chambers).
Canad. Ent. VI 73 : type *ostryaeella*, Chamb. (N. America).

Glyph. Aechmia, Treitschke 1833. (GLYPHIPTERYX, Hb.).
Schmett. Eur. IX. ii. 69 : type *equitella*, Scop. (Europe).

? Aechmioides, Bruand 1847 (*non-descr.*).
Cat. Syst. Microlep. Doubs, p. 87 : type [............ =] *unigutella*, Brd. (France).

Crypt. Aedemoses, Welsingham 1912. (STENOMA, Zeller).
Biol. Centr. Am., Het. IV 154 : type *haesitans*, Wlsm. (Mexico).

Ypon. Aedia, Duponchel 1836 (nec Hübner 1825). (ETHMIA, Hb.).
Hist. Nat. Lep. France X 296, 305-316 : type *bipunctella*, Fb. (Europe ; N. Africa).

Adel. Aedilis, Gistel 1848 (? descr.). (ADELA, Latr.).
Naturg. Thierr., p. VIII : type *reaumurella*, L. (Europe).

Aeg. AEGERIA, Fabricius 1807.
Illiger's Magazin VI 288 : type *apiformis*, L. (Europe).
|| Trochilium, Oken 1815.
|| Sphecia, Hb. 1820.
|| Sphecodoptera, Hmpsn. 1893.

Aeg. AEGERINA, Le Cerf 1917.
Obth. Et. Lep. Comp. XIV 332 : type *ovinia*, Le Cerf. (C. America).

Aeg. AEGEROSPHECIA, Le Cerf 1917.
Obth. Et. Lep. Comp. XIV 363 : type *calliptera*, Le Cerf. (Moluccas).
Aegerosphecia, Le Cerf, Obth. Et. Lep. Comp. XII 13 (1916) (*non-descr.*).

Schreck. AENICTERIA, Turner 1926.
Tr. R. Soc. S. Austr. L 143 : type *termiticola*, Turner. (Queensland).

Aeg. AENIGMINA, Le Cerf 1912.
Bull. S. E. France 1912. 291: type *aenea,* Le Cerf. (E. Africa).

Crypt. AEOLANTHES, Meyr. 1907.
B. J. XVII 739 : type *callidora,* M. (Khasis).

Oec. AEOLERNIS, Meyrick 1914.
Exot. Micr. I 269-270 : type *theatrica,* M. (Nyasaland).

Oec. AEOLOCOSMA, Meyr. 1880.
P. Linn. Soc. N. S. W. V. 224 : type *iridizona,* M. (N. S. Wales).

Schreck. AEOLOSCELIS, Meyr. 1907.
P. Linn. Soc. N. S. W. XXII 326 : type *hipparcha,* M. (W. Australia).

Tortr. AEOLOSTOMA, Meyr. 1910
P. Linn. Soc. N. S. W. XXXV 182 : type *scutiferana,* M. (Australia).

Gel. AEOLOTROCHA, Meyr. 1921.
Ann. Transv. Mus. VIII 78 : type *generosa,* M. (Natal).

Schreck. Aeraula, Meyr. 1897. (ERETMOCERA, Zeller).
P. Linn. Soc. N. S. W. XXII 369 : type *dioctis,* M. (W. Australia).

Cosm. AERONECTRIS, Meyr. 1917.
Exot. Micr. II 35 : type *euacta,* M. (S. India).

Crypt. AEROTYPIA, Walsingham 1911.
Biol. Centr. Am., Het. IV 82, f. 19 : type *pleurotella,* Wlsm. (Mexico).

Tortr Aesiocopa, Zeller 1877. (HOMONA, Wlk.).
H. S. E. R. XIII 106-108 : type *vacivana,* Zeller. (C. America).

Lith. Aesyle, Chambers 1875. (MARMARA, Clemens).
Cinc. Qly. Jl. Sci. II 97 : type *fasciella,* Chambers. (N. America).

Ypon AETHERASTIS, Meyr. 1909.
B. J. XIX 422 : type *uranias,* M. (Ceylon).

Phal Aethes, Pierce 1922. (PHALONIA, Hb.).
Genit. Brit. Tortr., p. 32 : type *smeathmanniana,* Fb. (Europe).
Aethes, Billberg (*non-descr.*).

Cosm. Aetia, Chambers 1880. (BATRACHEDRA, H. S.).
Jl. Cinc. Soc. N. H. II 186 : type *bipunctella,* Chamb. (Texas).

Schreck. Aetole, Chambers 1875. (CHRYSOESTHIA, Hb.).
Canad. Ent. VII 73 : type *bella,* Chamb. (N. America).

Eucosm. Affa, Walker 1863. (EUCOSMA, Hb).
Cat. XXVII 202 : type *bipunctella,* Wlk. (N America).

Epipyrop. AGAMOPSYCHE, Perkins 1905.
Hawaii. Sugar-Plant. Assoc., Entl. Bull. 1 pp. 83-84, f. 2 : type *threnodes*, Perkins (Queensland).

Cosm. AGANOPTILA, Meyr. 1915.
Exot. Micr. I 333-334 : type *phanarcha*, M. (Ceylon).

Phalon. Agapete, Pierce 1922. (PHALONIA, Hb.).
Genit. Brit. Tortr., p. 31 : type *zoegana*, Linn. (Europe).
Agapete, Hb., Cat. Lep. Coll. Franck, p. 98 (1825) (*non-descr.*).

Tin. Agarica, Sodoffsky 1837. (SCARDIA, Tr.).
Bull. Soc. Imp. Nat. Mosc. X (6) 94 : type *boleti*, Fb. (Europe).

Aluc. AGDISTIS, Hübner 1826.
Verz. p. 429 : type *adactyla*, Hb. (Europe).
|| Adactylus, Curtis 1833.
|| Adactyla, Zeller 1841.
|| Ernestia, Tutt (*non-descr.*).
|| Herbertia, Tutt (*non-descr.*)

Gel. AGELIARCHIS, Meyr. 1923.
Exot. Micr. II 622-623 : type *rhizogramma*, M. (Brazil).

Adel. Agisana, Möschler 1883. (CEROMITIA, Zeller).
Verh. z-b. Wien. XXXII 308 : type [*turpisella*, Wlk.=] *caffrariella*, Möschler. (S. Africa).

Glyph. AGITON, Turner 1926.
Tr. R. Soc. S. Austr. L 145 : type *idioptila*, Turn (Queensland).

Oec AGLAODES, Turner 1898.
Tr. R. Soc. S. Austr. XXII 205 : type *chionoma*, Turn. (Queensland).

Gel. AGNIPPE, Chambers 1872.
Canad. Ent. IV 194 : type *biscolorella*, Chamb. (Kentucky ; S Ohio).

Oec. Agnoea, Walsingham 1907. (BORKHAUSENIA, Hb.).
Proc. U. S. Nat. Mus. XXXIII 200 : type *evanescens*, Wlsm. (N America).
[*Note.*—Probably founded on an aberrant specimen of a *Borkhausenia.*]

Plut. Agoniopteryx, Treitschke 1835. (ORTHOTAELIA, Stephens).
Schmett. Eur. X iii. 185 : type *sparganiella*, Tr. (Europe).

Cosm. AGONISMUS, Walsingham 1907.
Faun. Hawaii. I. 512 : type *flavipalpis*, Wlsm. (Hawaii).

Oec. Agonopterix, Hübner 1826. (DEPRESSARIA Hw.).
Verz. pp. 410-411 : type *ocellana*, Fb. (Europe).
Agonopteryx, auct,

Agonox. AGONOXENA, Meyr. 1921.
Exot. Micr. II 471-472 : type *argaula*, M. (Fiji).

Tin. AGORARCHA, Meyr. 1925.
Treubia VI 433 : type *illapsa*, M. (Sumatra).

Tin. AGORAULA, Meyr. 1919.
Exot. Micr. II 242 : type *aspera*, M. (Burma).

Gel. Agriastis, Meyr. 1914. (ANACAMPSIS, Curtis).
T. E. S 1914. 251 : type *peloptila*, M. (Brit. Guiana).

Oec. Agriocoma, Zeller 1877. (HYPERCALLIA, Steph.).
H. S. E. R. XIII 379, 384, t. 5 ff. 133 *a*, *b* : type *catenella*, Z. (S. America).

Micropt. AGRIONYMPHA, Meyr. 1921.
Ann. Transv. Mus. VIII 144 : type *pseliacma*, M. (Natal).

Crypt. AGRIOPHARA, Rosenstock 1885.
A. M. N. H. (5) XVI 439 : type *cincrosa*. Ros. (E. Australia).

Schreck. AGRIOSCELIS, Meyr. 1913.
Exot. Micr. I 96 : type *tacita*, M. (India).

Amph. AGRIOTHERA, Meyr. 1907.
B. J. XVII 750 : type *melanacma*, M. (India ; Ceylon).

Eucosm. Ahmosia, Heinrich 1926. (POLYCHROSIS, Rag.).
U. S. A. Nat. Mus. Bull. 132, pp. 97, 98, ff. 58, 186 : type *galbinea*, Heinr. (N. America).

Ypon. AICTIS, Turner 1926.
Tr. R. Soc. S. Austr. L 145 : type *erythrozona*, Turn. (Queensland).

Oec. Alabonia, Hübner 1826. (OECOPHORA, Latr.).
Verz. p. 418 : type *geoffrella*, Linn. (Europe).

Tin. Alavona, Walker 1863. (MELASINA, Bdv.).
Cat. XXVIII 514-515 : type *indecorella*, Wlk. (S. India).

Aeg. Albuna, Henry-Edwards 1881. (PARANTHRENE, Hb.).
Papilio I 186 : type [*pyramidalis*, Wlk.=] *hylotomiformis*, Wlk. (N. America).

Aeg. ALCATHOË, Henry-Edwards 1882.
Papilio II 53 : type *caudata*, Harris. (N. America).

Gel. ALCIPHANES, Meyr. 1926.
Wyts. Gen. Ins., fasc. 184, p. 207 (Jan. 1926) : type *molybdantha*, M. (Ceylon).

Tortr. Aleimma, Hübner 1826. (TORTRIX, Linn.).
Verz. p. 391 : type *lœflingiana*, L. (Europe).

Eucosm. ALEXILOGA, Meyr. 1921.
Exot. Micr. II 526 : type *rubiginosana*, Wlk. (Brazil).

Glyph. Alicadra, Walker 1865. (IMMA, Wlk.).
Cat. XXXIV 1192 : type *atialis*, Wlk. (S. America).

Eriocran. Allochapmania, Strand 1917. (ERIOCRANIA, Zeller).
Intern. Ent. Zeitschr. X 137 : type *semipurpurella*, Steph. (Europe).

Oec. ALLOCLITA, Staudinger 1859.
Stett. Ent. Ztg. XX 247-248 : type *recisella*, Stdgr. (Spain).

Gel. Allocota Meyr. 1904. (HYPÅTIMA, Hb.).
P. Linn. Soc. N. S. W. XXIX 419-420 : type *simulacrella*, M. (N. S. Wales).

Oec. Allodoxa, Meyr. MS. (EUPSELIA, Meyr.).
(Unpublished, but note on structure *P. Linn. Soc. N. S. W.* 1883. 334).
Allodoxa, Meyr., P. Linn. Soc. N. S. W. VII 419 (1883) [Invalid ; no associated species.]

Glyph. Allononyma, Busck 1904. (ANTHOPHILA, Hw.).
Proc. U. S. Nat. Mus. XXVII 745-746 : type *diana*, Hb. (Europe ; N. America).

Oec. ALLOTALANTA, Meyr. 1913.
Exot. Micr. I 114 : type *autophaea*, M. (Asia Minor).

Aeg. ALONINA, Walker 1856.
Cat. VIII 62-63 : type *rhynchiiformis*, Wlk. (Natal).
|| Cicinnoscelis, Holland 1894.

Gel. ALSODRYAS, Meyr. 1914.
T. E. S. 1914. 250 : type *lactaria*, M. (Brit. Guiana).

Aluc. ALUCITA, Linnæus 1758.
Syst. Nat. (ed. X) I 542 : type *pentadactyla*, L. (Europe).
|| Pterophorus, Geoffroy 1762.
|| Pterophora, Hb. 1806 (*non-descr.*).
|| Aciptilia, Hb. 1826.
|| Aciptilus, Zell. 1841.
|| Merrifieldia, Tutt 1905 (*non-descr.*).
|| Porrittia, Tutt 1905 (*non-descr.*).
|| Wheeleria, Tutt 1905 (*non-descr.*).

Eucosm. Alytopeta, Turner 1916. (ARGYROPLOCE, Hb.).
Tr. R. Soc. S. Austr. XL 528-529 : type *delochlora*, Turn. (Queensland).

Tortr. ALYTOPISTIS, Meyr. 1920.
Exot. Micr. II 322 : type *tortricitella*, Wlk. (Tasmania).

Tin. Amadrya, Chambers 1878. (MYRMECOZELA, Zell.).
U. S. Geol. Surv. Bull. IV 128 : type *effrenatella*, Clem. (East. U. S. America).
(A mere *lapsus* for *Amydria*, Clemens).

Phal. AMALLECTIS, Meyr. 1917.
T. E. S. 1917. 1 : type *devincta*, M. (Peru).

Ypon. AMALTHINA, Meyr. 1914.
Ann. Transv. Mus. IV 200 : type *lacteata*, M. (Natal).

Tin. AMATHYNTIS, Meyr. 1907.
B. J. XVII 987 : type *physatma*, M. (Ceylon).

Cosm. AMAUROGRAMMA, Braun 1919.
Entl. News XXX 261-262 : type *extensa*, Braun. (California).

Oec. Amaurosetia, Stephens 1835. (BORKHAUSENIA, Hb.).
Ill. Brit. Ent., Haust. IV 353 : type [*minutella*, L.=] *oppositella*, Fb. (Europe).

Gel. AMBLOMA, Walsingham 1908.
P. Z. S. 1907. 946 : type *brachyptera*, Wlsm. (Tenerife).

Ypon. Amblothridia, Wallengren 1861. (ATTEVA, Walker).
Resa Eugen. Ins., p. 385 : type [*brucea*, Mo=] *fabricella*, Wlgn. (Java to China).

Gel. AMBLYPALPIS, Ragonot 1885.
Bull. S. E. Fr. 1885 209 : type *olivierella*, Rag. (Algeria).

Aluc. Amblyptilia, Hübner 1826. (PLATYPTILIA, Hb.).
Verz. p. 430 : type *acanthodactyla*, Hb. (Europe).

Schreck. AMBLYSCOPA, Meyr. 1922.
Exot. Micr. II 587-588 : type *isophaea*, M. (Peru).

Eup. AMBLYXENA, Meyr. 1914.
Exot. Micr. I 207 : type *enopias*, M. (Nyasaland).
(Should perhaps be merged in *Iriothyrsa*—see Meyr., Ann. Transv. Mus. VIII 121 : 1921).

Tortr. Amelia, Hübner 1826. (TORTRIX, Linn.).
Verz. p. 390 : type *viburnana*, Fb. (Europe).

Blast. Americides, Kirkaldy 1910. (PIGRITIA, Clemens).
Canad. Entom. XLII 8 : type [*ochromella*, Clem.=] *murtfeldtella*, Chambers. (Atlantic States).

Tortr. AMORBIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 352 : type *humerosana*, Clem. (N. America).
|| Hendecastema, Wlsm. 1879.
|| Ptychamorbia, Wlsm. 1892.

Crypt. Amorbœa, Meyr. 1908. (PTOCHORYCTIS, Meyr.).
B. J. XVIII 627 : type *hepatica*, M. (Bombay).

Schreck. AMPHICLADA; Meyr. 1912.
Exot. Micr. I 60 : type *fervescens*, M. (Grenada West Indies).

Gel. AMPHIGENES, Meyr. 1921.
Exot. Micr. II 436-437 : type *tartarea*, M. (New Guinea).

Oec. AMPHIPSEUSTIS, Meyr. 1921.
Ann. Transv. Mus. VIII 102 : type *disputanda*, M. (Transvaal).

Tortr. Amphisa, Curtis 1828. (PHILEDONE, Hb.).
Brit. Entom. V 209 : type [*gerningana*, Schiff.=] *pectinana*, Hb. (Europe).
Amphysa, Guenée 1845, Lederer 1859, Hein. 1863, Snell. 1882.

Oec. AMPHISBATIS, Zeller 1870.
Stett. Ent. Ztg. XXXI 304 : type *incongruella*, Stt. (Europe).

Aeg. AMPHITHALES, Meyr. 1926.
Exot. Micr. III 268 : type *episcopopa*, M. (Upper Burma).

Amph. AMPHITHERA, Meyr. 1892.
P. Linn. Soc. N. S. W. XVII 97 : type *heteromorpha*, M. (S. E. Australia).
|| Zonops, Turner 1900.

Crypt. AMPHITRIAS, Meyr. 1908.
B. J. XVIII 631 : type *cynica*, M. (Ceylon).

Lyonet. AMPHIXYSTIS, Meyr. 1901.
T. E. S. 1901. 576 : type *hapsimacha*, M. (New Zealand).

Crypt. Amphoritis, Meyr. 1905. (ACRIA, Stephens).
B. J. XVI 601 : type [*emarginella*, Don.=] *camelodes*, M. (India ; Ceylon).

Tin. Amydria, Clemens 1859. (MYRMECOZELA, Zeller).
Proc. Acad. Nat. Sci. Philad. XI 256 : type *effrenatella*, Clem. (N. America).
Amadrya (lapsus), Chambers 1878, Dyar 1903.

Gel. ANACAMPSIS, Curtis 1827.
Brit. Entom. IV, expl. t. 189 : type *populella*, Clerck. (Europe).
|| Tachyptilia, Heinemann 1870.
|| Agriastis, Meyr. 1914.

Oec. ANACATHARTIS, Meyr. 1927.
Exot. Micr. III 383-384 : type *eripias*, M. (Ceylon).

Crypt. ANACHASTIS, Meyr. 1911.
Tr. Linn. Soc. (2) XIV 288 : type *digitata*, M. (Seychelles).

Oec. ANACOEMASTIS, Meyr. 1914.
Exot. Micr. I 229 : type *glycaea*, M. (S. India).

Tortr. Anacrusis, Zeller 1877. (CACOECIA, Hb.).
H. S. E. R. XIII 87 : type *atrosparsana*, Z. (Brazil).

Crypt. Anadasmus, Walsingham 1897. (STENOMA, Zeller).
P. Z. S. 1897. 100 : type *soraria*, Z. (S. America).

Plut. Anadetia, Hübner 1826. (PLUTELLA, Schrank).
Verz. p. 405 : type [*porrectella*, L.=] *hesperidella*, Hb. (Europe).

Eucosm. ANALDES, Turner 1916.
Tr. R. Soc. S. Austr. XL 533-534 : type *hypolepta*, Turn. (Queensland).

Tin. ANALYTARCHA, Meyr. 1921.
Exot. Micr. II 473-474 : type *cyathodes*, M. (Queensland).

Ypon. ANAPHANTIS, Meyr. 1907.
P. Linn. Soc. N. S. W. XXXII 90 : type *isochrysa*, M. (Solomon Is.).

Gel. Anaphaula, Walsingham 1904. (ARISTOTELIA, Hb.).
E. M. M. XL 268-269 : type *gaditella*, Stdgr. (Europe).

Tin. Anaphora, Clemens 1859. (ACROLOPHUS, Poey.).
Proc. Acad. Nat. Sci. Philad. XI 260-262 : type *popeanella*, Clem. (U. S. America).

Gel. ANAPTILORA, Meyr. 1904.
P. Linn. Soc. N. S. W. XXIX 390 : type *isocosma*, M. (Queensland).

Gel. ANARSIA, Zeller 1839.
Isis XXXII 190 : type *spartiella*, Schrank. (Europe).

Gel. ANASPHALTIS, Meyr. 1926.
Wyts. Gen. Ins., fasc. 184, p. 107 : type *renigerella*, Z. (Europe).

Lyonet. ANASTATHMA, Meyr. 1886.
T. E. S. 1886. 290 : type *callichrysa*, M. (Fiji).

Gel. ANASTREBLOTIS, Meyr. 1927.
Ins. Samoa III 77 : type *calycopa*, M. (Samoa).

Cosm. Anataractis, Meyr. 1916. (TRACHYDORA, Meyr.).
Exot. Micr. I 565 : type *plumigera*, M. (India).

Eucosm. ANATHAMNA, Meyr. 1911.
Proc. Linn. Soc. N. S. W. XXXVI 261 : type *ostracitis*, M. (New Guinea).

Pterolonch. ANATHYRSA, Meyr. 1920.
Ann. S. Afr. Mus. XVII 299 : type *macroxyla*, M. (Cape Colony).

Cosm. Anatrachyntis, Meyr. 1915. (PYRODERCES, H. S.).
Exot. Micr. I 325 : type [*falcatella*, Stt.=] *spodochtha*, M. (India).

Tortr. Anatropia, Meyr. 1881. (DITULA, Stephens).
P. Linn. Soc. N. S. W. VI 463 : type *craterana*, M. (N. S. Wales).

Aeg. ANAUDIA, Wallengren 1863.
Wien. Ent. Mon. VII 138 : type *felderi*, Wlgn. (Bechuanaland).

Gel. ANAXYRINA, Meyr., 1918.
Exot. Micr. II 98 : type *cyanopa*, M. (S. India).

Oec. ANCHARCHA, Meyr. 1920.
Exot. Micr. II 368-369 : type *ombromorpha*, M. (W. Australia).

Tortr. ANCHICREMNA, Meyr. 1926.
Exot. Micr. III 246 : type *eulidias*, M. (Colombia).

Ypon. ANCHIMACHETA, Walsingham 1914.
Biol. Centr. Am., Het. IV 323 : type *capnodes*, Wlsm. (Mexico).

Oec. ANCHINIA, Hübner 1826.
Verz. p. 409 : type [*cristalis*, Scop.=] *verrucella*, Schiff. (Europe).
|| Palpula, Treitschke 1833.
|| Acropogona, Sodoffsky 1837.
|| Fugia, Duponchel 1846.

Oec. ANCHONOMA, Meyr. 1910.
B. J. XX 143 : type *xeraula*, M. (India ; China ; Japan).
|| Santuzza, Heinrich 1920.

Eucosm. Anchylopera, Curtis 1831. (ANCYLIS, Hb.)
Brit. Entom. VIII, expl. t. 376 : type *lundana*, Fb. (Europe).

Oec. ANCIPITA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 26 : type *atteria*, Busck. (Panama).

Eucosm. ANCYLIS, Hübner 1826.
Verz. p. 376 : type [*lactana*, Fb.=] *harpana*, Hb. (Europe).
|| Epicharis, Hb. 1826 (præocc.).
|| Phoxopteris, Tr. 1830.
|| Anchylopera, Curtis 1831. (Ancylopera, Wlsm.).
|| Anticlea, Stephens 1834.
|| Philalcea, Stephens 1835.
|| Phoxopteryx, Sodoffsky 1837.
|| Siderea, Stainton 1858.

Metachand. ANCYLOMETIS, Meyr. 1887.
T. E. S. 1887. 276 : type *trigonodes*, M. (Mauritius).

Ypon. Androgyne, Walsingham 1900. (NOSYMNA, Wlk.).
Cat. Het. Mus. Oxon. II 565 : type *punctata*, Wlsm. (India).

Gel. Andusia, Walker 1866. (? LECITHOCERA, H. S.).
Cat. XXXV 1836 : type *alternella*, Wlk. (Java).

Ypon. Anesychia, Hübner 1826. (ETHMIA, Hb.).
Verz. p. 413 : type *pusiella*, Rœmer. (Europe ; W. C. Asia).

Tortr. ANISOCHORISTA, Turner 1926.
Tr. R. Soc. S. Austr. L 132 : type *callizyga*, Low. (S. E. Australia).

Tortr. Anisogona, Meyr. 1881. (HOMONA, Wlk.).
P. Linn. Soc. N. S. W. VI 464-465 : type *similana*, Wlk. (Australia).

Gel. ANISOPLACA, Meyr. 1886.
Tr. N. Z. Inst. XVIII 171 : type *ptyoptera*, M. (N. Zealand ; S. America ; S. Africa).

Tortr. Anisotænia, Stainton 1859. (OLINDIA, Gn.).
Manual II 239 (Jan. 1859) : type *ulmana*, Hb. (Europe).
Anisotaenia, Steph., List Brit. Anim. B. M. X 48 (1852) (*non-descr.*).

Tin. Ankistrophorus, Walsingham 1887. (ACROLOPHUS, Pocy).
T. E. S. 1887. 140, 146-147 : type *corrientis*, Wlsm. (Argentina).

Anomol. ANOMOLOGA, Meyr. 1926.
Exot. Micr. III 308-309 : type *dispulsa*, M. (Transvaal).

Eucosm. Anomalopteryx, Kennel 1900 (*praeocc.*). (ARGYROPLOCE, Hb.).
Iris XIII 157 : type *xylinana*, Kennel. (Amur).

Prototh. ANOMOSES, Turner 1916.
T. E. S. 1915. 392 : type *hylecoetes*, Turn. (Queensland).

Gel. ANOMOXENA, Meyr. 1917.
T. E. S. 1917. 28-29 : type *spinigera*, M. (Colombia).

Epipyrop. ANOPYROPS, Jordan 1928.
Novit. Zool. XXXIV 140, t. 2 ff. 16, 17 : type *corticina*, Jordan. [Guiana].

Oec. ANORCOTA, Meyr. 1920.
Exot. Micr. II 365 : type *platyxantha*, M. (Bolivia).

Gel. Anorthosia, Clemens 1860 (DICHOMERIS, Hb.).
Proc. Acad. Nat. Sci. Philad. 1860. 161 : type *punctipennella*, Clem. (Atlantic States).

Crypt. ANTAEOTRICHA, Zeller 1854.
Linn. Ent. IX 355, 390-391, t. 3 ff. 29-33 : type (*walchiana*, Stoll. =) *griseana*, Fb. (Brazil).
|| Energia, Wlsm. 1912.
|| Aphanoxena, Meyr. 1915.

Gel. Anterethista, Meyr. 1914. (BELTHECA, Busck).
T. E. S. 1914. 237 : type *heteractis*, M. (Brit. Guiana).

Gel. ANTHINORA, Meyr. 1914.
T. E. S. 1914. 255-256 : type *xanthophanes*, M. (Brit. Guiana).

Gel. ANTHISTARCHA, Meyr. 1926.
Wyts. Gen. Ins., fasc. 184, p. 67 : type *geniatella*, Busck. (Panama).

Glyph. ANTHOPHILA, Haworth 1811.
Lep. Brit., p. 471 : type *fabriciana*, L. (Europe).
|| Simaëthis, Leach 1815.
|| Gauris, Hb. 1826.
|| Xylopoda, Latr. 1829.
|| Eutromula, Frœlich 1829 (*non-descr.*).
|| Hemerophila, Fernald 1900. (Hb. 1806—*non-descr.*).
|| Orchemia, Fernald 1900 (nec Guenée—*non-descr.*).
|| Allononyma, Busck 1904.

Eucosm. ANTHOZELA, Meyr. 1913.
Ann. Transv. Mus. III 280 : type *chrysoxantha*, M. (Transvaal).

Aeg. Anthrenoptera, Swinhoe 1892. (BEMBECIA, Hb.).
Cat. Het. Mus. Oxon. I 35 : type *contracta*, Wlk. (Japan).

Eucosm. Anticlea, Steph. 1834 (*praeocc.*). (ANCYLIS, Hb.).
Ill. Brit. Entom., Haust. IV 113-114 : type *lactana*, Fb. (Europe).

Ypon. ANTICRATES, Meyr. 1905. (? EPOPSIA, Turner).
B. J. XVI 612 : type *chrysantha*, M. (Ceylon).
|| Pyrozela, Meyr. 1906.
? EPOPSIA, Turner 1903.

Eucosm. ANTICTENISTA, Meyr. 1927.
Exot. Micr. III 337 : type *mesotricha*, M. (Brazil).

Oec. Antidica, Meyr. 1883. (LATOMETUS, Butler).
P. Linn. Soc. N. S. W. VIII 382 : type [*pilipes*, Butl.=] *eriomorpha*, M. (S. E. Australia).
Antidica, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883) [no associated species].

Tin. ANTIGAMBRA, Meyr. 1927.
Exot. Micr. III 321-322 : type *amphitrocta*, M. (Rhodesia).

Gel. Antiochtha, Meyr. 1905. (GASMARA, Wlk.).
B. J. XVI 598 : type *balbidota*, M. (Ceylon).

Lith. Antiolopha, Meyr. 1894. (CALOPTILIA, Hb.).
T. E. S. 1894. 25 : type *hemiconis*, M. (Burma).

Oec. ANTIOPALA, Meyr. 1888.
P. Linn. Soc. N. S. W. XIII 1646-1647 : type *tephraea*, M. (Tasmania).

Oec. ANTIPTERNA, Meyr. 1916.
Exot. Micr. I 551 : type *glacialis*. M. (Australia).

Glyph. ANTISPASTIS, Meyr. 1926.
Exot. Micr. III 307 : type *xylophragma*, M. (Peru).

Heliozel. ANTISPILA, Hübner 1826.
Verz. p. 419 : type [*pfeifferella*, Hb.=] *stadtmüllerella*, Hb. (Europe).
|| Diacopia, Clemens 1872.
|| Holocacista, Wlsm. & Drt. 1909.

Eucosm. Antithesia, Stephens 1834. (ARGYROPLOCE, Hb.)
Ill. Brit. Entom., Haust. IV 86-87 : type *corticana*, Hb. (Europe).
Antithesia, Steph., Cat. Brit. Ins. II 172 (1829) (*non-descr.*).

Crypt. ANTITHYRA, Meyr. 1906.
B. J. XVII 404 : type *vineata*, M. (Ceylon).

Crypt. ANTOLAEA, Meyr. 1914.
B. J. XXII 779-780 : type *xanthopa*, M. (Assam).

Cosm. Anybia, Stainton 1854. (LIMNAECIA, Stainton).
Lep. Brit. Tin. pp. 244-245, t. 7 ff. 11 " -" : type [*epilobiella*, Rœmer=] *langiella*, Stt. (Europe).

Schreck. Anypoptus, Durrant 1919. (COTAENA, Wlk.).
Novit. Zool. XXVI 120 : type *tricolor*, Rothschild. (Sarawak).

Oec. AOCHLETA, Meyr. 1884.
Tr. N. Z. Inst. XVI 21 : type *psychra*. M. (New Zealand).
Aochleta, Meyr, P. Linn. Soc. N. S. W. VII 425 (1883) [Invalid; no associated species).

Tin. APAPHRISTIS, Meyr. 1915.
Exot. Micr. I 292 : type *thermeliota*, M. (Nyasaland).

Gel. Apatema, Walsingham 1900. (OECOGONIA, Stainton).
E. M. M. XXXVI 219-220 : type [*fasciata*, Stt.-] *mediopallidum*, Wlsm. (Corsica).

Tortr. APATETA, Turner 1926.
Tr. R. Soc. S. Austr. L 137 : type *cryphia*, Turn. (W. Australia).

Gel. APATETRIS, Staudinger 1880.
H. S. E. R. XV 316 (sep., pp. 158-159) : type *mirabella*, Stdgr. (Asia Minor).
|| Dactylota, Snellen 1875.
|| Epiphthora, Meyr. 1888.

|| Dactylotula, Cockerell 1888.
|| Calyptrotis, Meyr. 1891.
|| Didactylota, Wlsm. 1892.
|| Stenopherna, Lower 1901.
|| Proactica, Wlsm. 1904.
|| Cecidophaga, Wlsm. 1911.

Gel. APETHISTIS, Meyr. 1908.
B. J. XVIII 459 : type *metoeca*, M. (Ceylon).

Gel. Aphanaula, Meyr. 1895. (RECURVARIA, Hw.).
Handb., p. 579 : type *leucatella*, Clerck. (Europe).

Eucosm. Aphania, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz. p. 386 : type *scriptana*, Hb. (Europe).

Tin. APHANOPTIS, Meyr. 1927.
Boll. Soc. Ent. Ital. LIX 161 : type *halogramma*, M. (Italian Somaliland).

Crypt. Aphanoxena, Meyr. 1915. (ANTAEOTRICHA, Zeller).
Exot. Micr. I 386 : type *pellocoma*, M. (Brit. Guiana).

Tortr. Aphelia, Hübner 1826. (TORTRIX, Linn.).
Verz. p. 390 : type *viburniana*, Fb. (Europe).

Eucosm. Aphelia, Herrich-Schäffer 1851. (BACTRA, Stephens).
Schmett. Eur. IV 243 : type *lanceolana*, Hb. (Europe).

Elach. Aphelosetia, Stephens 1834. (ELACHISTA, Tr.).
Ill. Brit. Entom., Haust. IV 287-288 : type [*argentella*, Cl. =] *cygnipennella*, Hb. (Europe).

Elach. Aphigalia, Dyar 1903. (ELACHISTA, Tr.).
U. S. A. Nat. Mus. Bull. 52, p. 544 : type *albella*, Chambers. (Texas).

Gel. APHNOGENES, Meyr. 1921.
Ann. Transv. Mus. VIII 88 : type *zomaea*, M. (Rhodesia).

Diplos. APHTHONETUS, Walsingham 1907.
Faun. Hawaii. I 517 : type *diffusa*, Wlsm. (Hawaii).

Oec. APILETRIA, Lederer 1855.
Verh. z-b. Ges. Wien V 231 : type *luella*, Led. (S. W. Asia ; Cyprus).

Tortr. APINOGLOSSA, Saalmüller 1890.
Ab. Senck. Nat. Ges. XV 331 : type *comburana*, Möschler. (Porto Rico).

Eupist. Apista, Hübner 1826. (EUPISTA, Hb.).
Verz. p. 427 : type *gallipennella*, Hb. (Europe).

Glyph. Apistomorpha, Meyr. 1880. (GLYPHIPTERIX, Hb.).
P. Linn. Soc. N. S. W. V 247 : type *argyrosema*, M. (E. Australia).

Oec. APLOTA, Stephens 1834.
Ill. Brit. Entom., Haust. IV 225 : type *palpella*, Hw. (Europe).

Tin. Apoclisis, Walsingham 1914. (ACROLOPHUS, Poey).
Biol. Centr. Am., Het. IV 380 : type *rupestris*, Wlsm. (Jamaica).

Gel. APOCRITICA, Meyr. 1926.
Wyts. Gen. Ins., fasc. 184, p. 64 : type *chromatica*, M. (Seychelles).

Gel. Apodia, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschmett. II. i. 286 : type *bifractella*, Douglas. (Europe).

Gel. APONOEA, Walsingham 1905.
E. M. M. XLI 125-126 : type *obtusipalpis*, Wlsm. (Algeria).

Lith. APOPHTHISIS, Braun 1915.
Canad. Entom. XLVII 190-192 : type *pullata*, Braun. (N. America).

Gel. Apopira, Walsingham 1911. (COMMATICA, Meyr.).
Biol. Centr. Am., Het. IV 73, f. 17 : type *falcatella*, Wlk. (C. & S. America).

Scythr. Apostibes, Walsingham 1907. (SCYTHRIS, Hb.).
E. M. M. XLIII 57 : type *griseilineata*, Wlsm.

Gel. APOTACTIS, Meyr. 1918.
Ann. Transv. Mus. VI 52 : type *drimylota*, Meyr. (S. E. Africa).

Cosm. APOTHETODES, Meyr. 1919.
Exot. Micr. II 233 : type *dialectica*, Meyr. (India).

Gel. APOTHETOECA, Meyr. 1922.
Nat. Hist. Juan Fernandez III 268 : type *synaphrista*, M. (Masatierra).

Gel. APOTISTATUS, Walsingham 1904.
E. M. M. XL 271-272 : type *leucostictus*, Wlsm. (Algeria).

Tin. Apotomia, Dietz 1905. (SETOMORPHA, Zeller).
Tr. Am. Ent. Soc. XXXI 17, t. 4 f. 4 : type [*insectella*, Fb.=] *fractiliniella*, Dietz.

Eucosm. Apotomis, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz. p. 380 : type [*corticana*, Hb.=] *turbidana*, Hb. (Europe).

Glyph. APRATA, Moore 1883.
Lep. Ceylon II 106 : type *mackwoodii*, Mo. (Ceylon).

Tin. APRETA, Dietz 1905.
Tr. Am. Ent. Soc. XXXI 20, t. 4 ff. 6, 11, 12 : type *paradoxella*. Dietz. (California).
|| Epichæta, Dietz 1905.

Gel. Aproærema, Durrant 1897. (STOMOPTERYX, Hein.).
E. M. M. XXXIII 221 : type *anthyllidella*, Hb. (Europe).

Glyph. APROOPTA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 171 : type *melanchlaena*, Turner. (N. S. Wales).

Gel. Aprosoesta, Turner 1919. (CROCANTHES, Meyr.).
Proc. R. Soc. Queensl. XXXI 151 : type *pancala*, Turner. (Queensland).

Tortr. APURA, Turner 1916.
Tr. R. Soc. S. Austr. XL 519 : type *xanthosoma*, Turner. (N. Queensland).

Oec. ARACHNOGRAPHA, Meyr. 1914.
Exot. Micr. I 222 : type *micrastrella*, M. (S. E. Australia).

Plut. ARAEOLEPIA, Walsingham 1881.
P. Z. S. 1881. 303 : type *subfasciella*, Wlsm. (West. U. S. America.)

Crypt. ARAEOSTOMA, Turner 1917.
Proc. R. Soc. Queensl. XXIX 97 : type *aenicta*, Turner. (Queensland).

Schreck. ARAUZONA, Walker 1864.
Cat. XXXI 25-26 : type *basalis*, Wlk. (C. & S. America).

Oec. ARCHAERETA, Meyrick 1914.
Exot. Micr. I 223 : type *dorsivittella*, Wlk. (S. E. Australia)

Lyonet. ARCHEMITRA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. p. 95 : type *iorrhoa* M. (Br. E. Africa).

Chlid. ARCHIMAGA, Meyrick 1905.
B. J. XVI 608 : type *pyractis*, M. (Ceylon).

Tortr. Archips, Walsingham 1900. (CACOECIA, Hb.).
A. M. N. H. (7) V 379 : type [*piceana*, Linn.=] *oporana*, Hb. (Europe).
Archips, Hb., Tentamen p. 2 (1806) (*non-descr.*).

Oec. ARCHISOPHA, Meyrick 1918.
Exot. Micr. II 214 : type *foliosa*, M. (Ceylon).

Tin. ARCHYALA, Meyrick 1889.
Tr. N. Z. Inst. XXI 159 : type *paraglypta*, M. (New Zealand).
|| Progonarma, Meyr. 1911.

Lyonet. ARCTOCOMA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 170-171 : type *ursinella*, M. (S. E. Australia).

Oec. ARCTOPODA, Butler 1883.
T. E. S. 1883. 66-67 : type *maculosa*, Butl. (Chile).
|| Polypseustis, Dognin 1908.

Oec. ARCTOSCELIS, Meyrick 1894.
T. E. S. 1894. 22 : type *epinyctia*, M. (Burma).

Tortr. ARDEUTICA, Meyrick 1913.
T. E. S. 1913. 172 : type *spumosa*, M. (Peru).

Tin. ARDIOSTERES, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 519 : type [*lacerata*, M.=] *moretonella*, nec. Wlk (Australia).

Oec. ARDOZYGA, Lower 1902.
Tr. R. Soc. S. Austr. XXVI 241 : type *tetralychna*, Low. (Australia).

Gel. AREGHA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 333, f.6 : type *abhaustella*, Chrét. (Algeria).

Oec. AREOCOSMA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 7 : type *orsobela*, M. (C. Colony).

Plut. Argiope, Chambers 1873 (*praeocc*). (ACROLEPIA, Curtis).
Canad. Entom. V 13 : type *incertella*, Chamb. (N. & C. America).

Ypon. ARGYRESTHIA, Hübner 1826.
Verz. p. 422 : type *goedartella*, Linn. (Europe).
|| Oligos, Treits. 1830 (*non-descr.*).
|| Ederesa, Curtis 1833.
|| Argyrosetia, Stephens 1834.
|| Ismene, Stephens 1834.
|| Blastotere, Ratz. 1840.

Phal. Argyridia, Stainton 1859. (PHALONIA, Hb.).
Manual II 277 (5. III. 1859) : type *dipoltella*, Hb. (Europe).
Argyridia, Steph., List. Brit. Anim. B. M. X. 83 (1852) (*non-descr.*).

Gel. Argyritis, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschmett. II. i. 283 : type *pictella*, Z. (Europe).

Phal. Argyrolepia, Stephens 1834. (EUXANTHIS, Hb.).
Ill. Brit. Entom., Haust. IV 175-176 : type *lathoniana*, Hb. (Europe).
Argyrolepia, Steph. Cat. Brit. Ins. II 190 (1829). (*non-descr.*).

? Argyromis, Stephens 1829 (non-descr.).
Cat. Brit. Ins. II 205 : type (?).
(Invalid : apparently intended for *Argyromiges*, Curtis).

Lyonet. Argyromiges, Curtis 1829. (LYONETIA, Hb.).
Brit. Entom. VI, expl. t. 284: type [*clerkella*, Linn.=] *autumnella*, Curtis. (Europe).

Eucosm. ARGYROPLOCE, Hübner 1826.
Verz. p. 379: type *arbutella*, Linn. (Europe).
|| Hedya, Hb. 1826.
|| Apotomis, Hb. 1826.
|| Limma, Hb. 1826.
|| Phiaris, Hb. 1826.
|| Celypha, Hb. 1826.
|| Eudemis, Hb. 1826.
|| Episagma, Hb. 1826.
|| Aphania, Hb. 1826.
|| Thirates, Treits. 1829 (*non-descr.*)
|| Penthina, Tr. 1830.
|| Sericoris, Tr. 1830.
|| Antithesia, Steph. 1834.
|| Euchromia, Steph. 1834 (nec. Hb. 1820).
|| Roxana, Steph. 1834.
|| Selenodes, Guenée 1845 (*non-descr.*).
|| Aterpia, Gn. 1845 (*non-descr.*).
|| Stictea, Gn. 1845 (*non-descr.*).
|| Melodes, Gn. 1845 (*non-descr.*).
|| Eccopsis, Zeller 1852.
|| Brachytaenia, Stt. 1858 (Steph. 1852—*non-descr.*).
|| Mixodia, Stt. 1859 (Gn. 1845—*non-descr.*).
|| Cymolomia, Lederer 1859.
|| Exartema, Clemens 1860.
|| Dudua, Walker 1864.
|| Phaecasiophora, Grote 1873.
|| Ecdytolopha, Zeller 1875.
|| Platypeplus, Wlsm. 1887.
|| Cacocharis, Wlsm. 1892.
|| Cryptophlebia, Wlsm. 1899.
|| Anomalopteryx, Kennel 1900 (*praeocc.*).
|| Olethreutes, Wlsm. 1900 (Hb. 1806 —*non-descr.*)
|| Phaecadophora, Wlsm. 1900.
|| Lipsotelus, Wlsm. 1900.
|| Sisona. Snellen 1901.
|| Temnolopha, Lower 1901.
|| Sorolopha, Lower 1901
|| Kennelia, Rebel 1901.

|| Pogonozada, Hampson 1905.
|| Loxoterma, Busck 1906.
|| Acanthothyspoda, Lower 1908.
|| Eucosma (nec. Hb.), Meyr. (ante. XI 1909).
|| Alypeta, Turner 1916.
|| Esia, Heinrich 1926.
|| Eumarozia, Heinrich 1926.
|| Zomaria, Heinrich 1926.
|| Badebecia, Heinrich 1926.
|| Evora, Heinrich 1926.

Tortr. Argyroptera, Duponchel 1834. (CNEPHASIA, Curtis).
Ann. S. E. Fr. III 448 : type (*argentana*, Cl.=] *gouana*, L. (Europe).

Ypon. Argyrosetia, Stephens 1834. (ARGYRESTHIA, Hb.).
Ill. Brit. Entom. Haust. IV 251-252 : type *goedartella*, L. (Europe).
Argyrosetia Steph., Cat. Brit. Ins. II 205 (1829) (*non-descr.*).

Tortr. Argyrotaenia, Pierce 1922. (EULIA, Hb.).
Genit. Brit. Tortr. p. 1 : type *politana*, Hw. (Europe).
Argyrotaenia, Steph. List Spec. Brit. Ins. X 67-68 (1852) (*non-descr.*).

Tortr. ARGYROTOZA, Stephens 1834.
Ill. Brit. Entom., Haust. IV 173 : type *bergmanniana*. L. (Europe, N. America).
Argyrotoza, Steph., Cat. Brit. Ins. II 189 (1829) (*non-descr.*).
Argyrotosa, H. S., Schmett. Eur. IV 169 (1851).
Argyrotoxa, Hein., Kleinschmett. Deuts. I. i, 48 (1863) : Zeller, Meyr. Pierce, Forbes.

Crypt. ARIGNOTA, Turner 1897.
Ann. Queensl. Mus., No. 4, p. 21 : type *stercorata*, Lucas. (Australia).

Lith. ARISTAEA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 52 : type *periphanes*, M (Tasmania).

Oec. ARISTEIS, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 762 : type *chrysoteuches*, M. (S. E. Australia).
Aristeis, Meyr. P. Linn. Soc. N. S. W. VII 421 (1883) [Invalid : no associated species].

Tortr. ARISTOCOSMA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 427-428 : type *chrysophilana*, Wk. (Australia).

Gel. ARISTOTELIA, Hübner 1826.
Verz. p. 424 : type *decurtella*, Hb. (Eürope : W. Asia)
|| Miorosetia, Stephens 1831.
|| Nomia, Clemens 1860.
|| Chrysopora, Clemens 1860.
|| Nannodia, Hein. 1870.
|| Argyritis, Hein. 1870.
|| Apodia, Hein. 1870.
|| Ptocheuusa, Hein. 1870.
|| Ergatis, Hein. 1870.
|| Doryphora, Hein. 1870.
|| Monochroa, Hein. 1870.
|| Lamprotes, Hein. 1870.
|| Euchrysa, Zeller 1873.
|| Xystophora, Hein. 1876.
|| Syneuntis, Wlgn. 1881.
|| Isochasta, Meyr. 1886.
|| Doryphorella, Ckll. 1888.
|| Eucatoptus, Wlsm. 1897.
|| Anaphaula, Wlsm. 1901.
|| Parapodia, Joannis 1912.

Gel. AROGA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 13-14 : type *paraplutella*, Busck (California ; Panama).

Gel. AROGALEA, Walsingham 1910.
Biol. Centr. Am., Het. IV 48-49, f-12 : type *cristifasciella*, Chambers. (U. S. America).

Gel. AROTRIA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 387 : type *iophaea*, M. (Queensland).

Tortr. AROTROPHORA, Meyrick 1881.
P. Linn Soc. N. S. W. VI 528 : type *arcuatalis*, Wlk. (Australia).

Scythr. Arotrura, Walsingham 1888. (SCYTHRIS, Hb.).
Insect Life I 116-117, ff. 22 *a-c* : type *eburnea*, Wlsm. (Arizona).

Arrhen. ARRHENOPHANES, Walsingham 1913.
Biol. Centr. Am., Het. IV 204-205 : type *perspicilla*, Stoll (C. & S. America).

Ypon. Artenacia, Chrétien 1905. (DISTAGMOS, H. S.).
Naturaliste XXVII 29-31 : type *jaurella*, Chrét. (S. France).

Oec. ARTIASTIS, Meyrick 1888.
P. Linn. Soc. N. S. W. XIII 1674 : type *tepida*, M. (Australia).

Eucosm. ARTICOLLA, Meyrick 1907.
B. J. XVII 976 : type *cyclidias*, M. (Ceylon).

Crypt. ASAPHARCHA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 292 : type *strigifera*, M. (Transvaal).

Eucosm. Asaphistis, Meyrick 1909. (PROSCHISTIS, Meyr.).
B. J. XIX 590 : type *praeceps*, M. (Assam ; Borneo).

Cosm. ASCALENIA, Wocke 1876.
Hein., Schmett. Deuts., Kleinschm. II. ii. 421-422 : type *vanella*, Frey (Europe).
|| Cholotis, Meyr. 1911.

Eucosm. Ascelodes, Meyrick M. S. (EUCOSMA, Hb.).
(Invalid : unpublished and sunk under *Eucosma*).

Tortr. ASCERODES, Meyrick 1905.
T. E. S. 1905. 234 : type *prochlora*, M. (New Zealand).

Aeg. ASCHISTOPHLEPS, Hampson 1893.
Faun. India, Moths I 200, f. 129 : type *lampropoda*, Hmp. (Assam).

Gel. ASMENISTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 241 : type *cucullata*, M. (Nyasaland).

Eucosm. Aspidia, Duponchel 1834. (NOTOCELIA, Hb.).
Ann. S. E. Fr. III 444 : type [*uddmanniana*, L.=] *solandriana*, Fb. (nec. Linn.) (Europe ; Asia Minor).

Lyonet Aspidisca, Clemens 1860 (*praeocc.*) (COPTODISCA, Wlsm.).
Proc. Acad. Nat. Sci. Philad. XII 11-12 : type *splendoriferella* Clem. (N. America).
Aspidisca, Clem., Ent. Weekly Intell. VII 87-88 (1859) [Type mentioned but not then described].

Eucosm. Aspila, Stephens 1834. (ENARMONIA, Hb.).
Ill. Brit. Entom., Haust. IV 104 : type (*ianthinana*, Dup.=] *lediana*, Steph. (Europe).

Lith. Aspilapteryx, Spuler 1910. (CALOPTILIA, Hb.).
· Schmett. Eur. II 407, f. 158 : type *tringipennella*, Z. (Europe ; Asia Minor).

Eucosm. Aspis, Treitschke 1830 (*praeocc.*). (NOTOCELIA, Hb.).
Schmett. Eur. VIII 156 : type *uddmanniana*, Linn. (Europe).
nec. *Aspis*, Laurenti 1768—REPTILIA.

Eucosm. Astatia, Hübner 1826. (EUCOSMA, Hb.).
Verz. p. 377 : type *solandriana*, Linn. (Europe).

Eucosm. Asthenia, Hübner 1826. (EUCOSMA, Hb.).
Verz. p. 381 : type *pygmaeana*, Hb. (C. & W. Europe).

Tortr. Asthenoptycha, Meyrick 1881. (DITULA, Stephens).
P. Linn. Soc. N. S. W. VI 461 : type *hemicryptana*, M. (Australia).

Oec. ASTIARCHA, Meyrick 1914.
Exot. Micr. I 248 : type *aureatella*, Snellen. (Java).

Tin. ASTROGENES, Meyrick 1921.
Tr. N. Z. Inst. LIII. 335 : type *chrysograpta*, M. (New Zealand).

Eupist. Astyages, Stephens 1834. (EUPISTA, Hb.).
Ill. Brit. Entom., Haust. IV 279 : type *coracipennella*, Hb (Europe).

Eupist. Asychna, Stainton 1854. (METRIOTES, H. S.).
Lep. Brit. Tin. p. 215, t. 8 ff. 1 *a-c* : type *modestella*, Dup. (Europe).

Lyonet. ASYMPLECTA, Meyrick 1921.
Zool. Meded. VI 193-194 : type *circumflua*, M. (Java).
|| Pycnobela, Turner 1923.

Tin. ASYNDETAULA, Meyrick 1919.
Exot. Micr. II 261-262 : type *vagula*, M. (Assam).

Tin. Atabyria, Snellen 1884. (SCARDIA, Tr.).
Tijds. Entom. XXVII 164-166, t. 9 ff. 1 *a*, *b*: type *bucephala*, Snellen. (Siberia ; Borneo ; India ; Natal).

Elach. ATACHIA, Wocke 1876.
Hein. Schmett. Deuts. en Kleinschm. II. ii. 464 : type *pigerella*, H. S. (Europe).

Lyonet. ATALOPSYCHA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 176-177 : type *atyphella*, M. (N. S. Wales).

Gel. ATASTHALISTIS, Meyrick 1886.
T. E. S. 1886. 279 : type *pyrocosma*, M. (New Guinea).
|| Crocsopola, Meyr. 1904.

Tin. ATELIOTUM, Zeller 1839.
Isis XXXII 189 : type *hungaricellum*, Zeller (Europe).
|| Hyopiora, Meyr. 1908.

Tortr. ATELODORA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 426-427 : type *pelochytana*, M. (E. Australia).

Oec. ATELOSTICHA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 490 : type *phaedrella*, M. (N. S. Wales).
Atelosticha, Meyr. P. Linn. Soc. N. S. W. VII 419 (1883) [Invalid ; no associated species].

Ypon. ATEMELIA, Herrich-Schäffer 1853.
Schmett. Eur. V 33 : type *torquatella*, Zeller. (Europe).

Eucosm. Aterpia, Guenée 1845 (*non-descr.*) (ARGYROPLOCE, Hb.).
Aterpia, Gn., Ann. S. E. Fr. (2) III 161 : type *andereggana*, Gn. (Europe).
(Invalid : has never been described).

Oec. ATHEROPLA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 758-759 : type *melichlora*, M. (N. S. Wales).
Atheropla, Meyr. P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid ; no associated species].
? Eido, Chambers 1873=
|| Eumeyrickia, Busck 1902.

Crypt. Athleta, Walsingham 1912. (STENOMA, Zeller).
Biol. Centr. Am., Het. IV 155 : type *trisecta*, Wlsm. (C. America).

Schreck. ATHLOSTOLA, Meyrick 1924.
Exot. Micr. III 97 : type *pyrophracta*, M. (Assam).

Gel. ATHRINACIA, Walsingham 1911.
Biol. Centr. Am., Het. IV 104-105, f. 21 : type *xanthographa*, Wlsm. (Mexico).

Crypt. ATHRYPSIASTIS, Meyrick 1910.
T. E. S. 1910. 457-458 : type *phaeoleuca*, M. (New Guinea).
? Topiris, Walker 1863=.

Schreck. Atkinsonia, Stainton 1859. (OEDEMATOPODA, Zeller).
T. E. S. (2) V 125 : type *clerodendronella*, Stt. (India).

Alucit. ATOMOPTERYX, Walsingham 1891.
E. M. M. XXVII 216 : type *doeri*, Wlsm. (S. America).

Oec. ATOMOTRICHA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 324-325 : type *ommatias*, M. (New Zealand).
Atomotricha, Meyr. P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid no associated species].
|| Brachysara, Meyr. 1883.

Tin. Atopocera, Walsingham 1897. (ACROLOPHUS, Poey).
P. Z. S. 1897. 169 : type *occultum*, Wlsm. (W. Indies).

Gel. ATOPONEURA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 4 : type *violacea*, Busck (Panama).
|| Eunomarcha, Meyrick 1923.

Oec. ATOPOPHRICTIS, Meyrick 1920.
Exot. Micr. II 369 : type *xenosema*, M. (India).

Cosm. Atremaea, Staudinger 1871. (LIMNAECIA, Stainton).
Berlin Ent. Zeits. XIV 317 : type *lonchoptera*, Stdgr. (S. Europe).

Oec. ATRIBASTA, Turner 1916.
Proc. Linn. Soc. N. S. W. XLI 348: type *fulvifusa*, Turner. (Queensland).

Tortr. ATTERIA, Walker 1863.
Cat. XXVIII 421-422: type *strigicinctana*, Wlk. (S. America).

Ypon. ATTEVA, Walker 1854.
Cat. II 526: type *niveigutta*, Wlk. (India).
|| Poeciloptera, Clemens 1860.
|| Amblothridia, Wallengren 1861.
|| Corinea, Walker 1863.
|| Synadia, Walker 1866.
|| Carthara, Walker 1866 (nec. 1865).
|| Scintilla, Guenée 1879 (*praeocc.*).
|| Syblis, Guenée 1879.

Glyph. ATYCHIA, Latreille 1809.
Gen. Crust. Ins. IV 214: type *appendiculata*, Esper. (Europe).
|| Brachodes, Guenée 1845.

[.... Auchoteles, Zeller 1877.
H. S. E. R. XIII 83-84: type *perforatana*, Z. (? Australia; ? Brazil). (Probably synonym of *Uzeda*, Wlk., which is not a Micro.)].

Schreck. AUGASMA, Herrich-Schaffer 1853.
Schmett. Eur. V 50, t. 13 ff. 36, 37: type *aeratellum*. Zeller. (Europe).

Tin. AUGOLYCHNA, Meyrick 1922.
Exot. Micr. II 595-596: type *septemstrigella*, Chambers. (Texas; Peru).

Gel. Aulacomima, Meyrick 1904. (BRACHMIA, Hb.).
P. Linn. Soc. N. S. W. XXIX 395: type *trinervis*, M. (N. S. Wales).

Gel. AULIDIOTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 182-183: type *phoxopterella*, Snellen. (Assam; Java).

Oec. AULOTROPHA, Meyrick 1918.
Ann. Transv. Mus. VI 32: type *pentasticta*, M. (Natal).

Aeg. Austrosetia, Felder 1874 (*non-descr.*). (SYNANTHEDON, Hb.).
Reise Novara II, p. 2, t. 82 f. 22: type *semirufa*, Felder. (Cape Colony).
(Apparently invalid, as never described).

Tortr. AUTHOMAEMA, Turner 1916.
Tr. R. Soc. S. Austr. XL 507: type *pentacosma*, Lower. (S. E. Australia).

Carp. Autogriphus, Walsingham 1897. (MERIDARCHIS, Zeller).
T. E. S. 1897. 59-60 : type *luteus*, Wlsm. (W. Africa).

Plut. AUTOMACHAERIS, Meyrick 1907.
B. J. XVII 749 : type *epichlora*, M. (Assam).

Gel. Automola, Meyrick 1883 (*praeocc.*). (AUTOSTICHA, Meyr.).
E. M. M. XX 34 : type *pelodes*, M. (Celebes; Hawaii).
nec. *Automola*, Loew.

Gel. Autoneda, Busck 1902. (MEGACRASPEDUS, Zeller).
Bull. U. S. Nat. Mus. LII 496 : type *plutella*, Chambers. (N. America).

Tin. Autoses, Hübner 1826. (TINEA, Linn.).
Verz. p. 401 : type *pellionella*, Linn. (Cosmopolitan).

Gel. AUTOSTICHA, Meyrick 1886.
T. E. S. 1886. 281 : type *pelodes*, M. (Celebes ; Hawaii).
|| Automola, Meyr. 1883 (*praeocc.*).
|| Epicharma, Wlsm. 1897.
|| Epicoenia, Meyr. 1906.
|| Prosomura, Turner 1919.

Blast. AUXIMOBASIS, Walsingham 1892.
P. Z. S. 1891. 534, t. 41 f. 9 : type *persimilella*, Wlsm. (W. Indies).
|| Valentinia, Wlsm. 1907.

Crypt. Auxocrossa, Zeller 1854. (STENOMA, Hb.).
Linn. Entom. IX 351-355, 385-386, t. 3 f. 25 : type *hopfferi*, Zeller. (Brazil).

Cosm. AXIARCHA, Meyrick 1921.
Ann. Transv. Mus. VIII 96 : type *discosema*, M. (C. Colony).

Gel. AXYROSTOLA, Meyrick 1923.
Exot. Micr. III 29 : type *acherusia*, M. (Burma).

Tin. AZALEODES, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 192 : type *micronipha*, Turner. (Queensland).

Ypon. Azinis, Walker 1863. (ETHMIA, Hb.).
Cat. XXVIII 541 : type *hilarella*, Wlk. (Ceylon).

B

Ypon. Babaiaxa, Busck 1902. (ETHMIA, Hb.).
Jl. N. Y. Ent. Soc. X 95, t. 12 f. 4 : type *delliella*, Fernald. (Texas).

Tin. Bacotia, Tutt 1900. (LUFFIA, Tutt.).
Brit. Lep. II 252-253 : type *sepium*, Speyer. (Europe).
Bacotia, Tutt, Ent. Rec. XI 207 (1899) (*non-descr.*).

Eucosm. BACTRA, Stephens 1834.
Ill. Brit. Entom. Haust. IV 124 : type *lanceolana*, Hb. (Europe).
|| Aphelia (nec. Hb. 1826), H. S. 1851, Steph. 1829 (*non-descr.*).
|| Leptia, Guenée 1845 (*non-descr.*).
|| Chiloides, Butler 1881.
|| Noteraula, Meyr. 1892.
|| Bracta, Pierce 1922 (lapsus).

Gel. Bactrolopha, Lower 1901. (DORYCNOPA, Lower).
Tr. R. Soc. S. Austr. XXV 79 : type *orthodesma*, Lower. (N. S. Wales).

Eucosm. Badebecia, Heinrich 1926. (ARGYROPLOCE, Hb.).
U. S. A. Nat. Mus. Bull. 132, pp. 121-125, ff. 13, 256 : type *urticana*, Hb. (Europe ; N. America).

Glyph. Badera, Walker 1866. (TORTYRA, Wlk.).
Cat. XXXV 1819 : type *pretiosa*, Wlk. (Java ; Celebes New Guinea).

Crypt. BAEONOMA, Meyrick 1916.
Exot. Micr. I 507 : type *mastodes*, M. (French Guiana).

Aeg. BALATAEA, Walker 1864.
Cat. XXXI 110 : type *aegerioides*, Wlk. (N. China).

Eucosm. Balbis, Walsingham 1897. (HEMIMENE, Hb.).
P. Z. S. 1897. 128 : type *assumptana*, Wlk. (S. America).

Tortr. BALIOXENA, Meyrick 1912.
Exot. Micr. I 12 : type *iospila*, M. (Madagascar).

Tin. Bankesia, Tutt 1900. (TALEPORIA, Hb.).
Brit. Lep. II 200-201 : type *staintoni*, Wlsm. (Europe).
Bankesia, Tutt, Ent. Rec. XI 191 (1899) (*non-descr.*).

Oec. BARANTOLA, Walker 1864.
Cat. XXIX 815-816 : type *pulcherrima*, Wlk. (Queensland).
|| Magostolis, Meyr. 1886.
|| Periclita, Turner 1917.

Eucosm. Barbara, Heinrich 1923. (EVETRIA, Hb.).
U. S. Nat. Mus. Bull. 123, p. 27: type *colfaxiana*, Kearfott (California).

Tin. BARBAROSCARDIA, Walsingham 1891.
T. E. S. 1891. 84, t. 7 f. 76 : type *fasciata*, Wlsm. (S. Africa).

Oec. BAREA, Walker 1864.
Cat. XXIX 819 : type *consignatella*, Wlk. (E. Australia).
|| Phloeopola, Meyr. 1883.

Tortr. BARNARDIELLA, Turner 1925.
Tr. R. Soc. S. Austr. XLIX 49-50 : type *sciaphila*, Turner. (Queensland).

Tin. BARYMOCHTHA, Meyrick 1922.
Exot. Micr. II 593 : type *entherastis*, M. (Guiana ; Brazil).

Tin. BASANASCA, Meyrick 1922.
Exot. Micr. II 594 : type *parcens*, M. (Brazil).

Tin. BASCANTIS, Meyrick 1914.
Tr. N. Z. Inst. XLVI 114-115 : type *sirenica*, M. (New Zealand)

Crypt. BASSARODES, Meyrick 1910.
T. E. S. 1910. 459 : type *siriaca* M. (Solomon Isds.).

Gel. BATENIA, Chrétien 1908.
Bull. S. E. Fr. 1908. 57-58 : type *fasciella*, Chrét. (Algeria).

Oec. BATHRAULA, Meyrick 1919.
Exot. Micr. II 237-238 : type *simulatella*, Wlk. (Borneo).

Eucosm. BATHROTOMA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 675 : type *constrictana*, M. (Australia).

Tin. BATHROXENA, Meyrick 1919.
Exot. Micr. II 243 : type *heteropalpella*, Dietz. (N. America).
|| Pelates, Dietz 1905 (*praeocc.*).

Oec. BATIA, Stephens 1834.
Ill. Brit. Entom., Haust. IV 290-291 ; type *lunaris*, Hw. (Europe).
|| Discolata, Spuler 1910.
|| Chirocompa, Meyrick 1914.

Tortr. Batodes, Lederer 1859. (DITULA, Stephens).
Wien. Ent. Mon. III 242, t. 1 f. 7 : type [*angustiorana*, Hw.=] *dumeriliana*, Dup. (Europe).
Batodes, Guenée, Ann. S. E. Fr. (2) III 175 (1845) (*non-descr.*).

Cosm. BATRACHEDRA, Herrich-Schäffer 1853.
Schmett. Eur. V 54, t. 9 ff. 18-21 : type (*praeangusta*, Hw.=] *turdipennella*, Tr. (Europe).
|| Tetanocentria, Rebel 1902.
|| Eustaintonia, Spuler 1910.

Gel. BATTARISTIS, Meyrick 1914.
T. E. S. 1914. 245-246 : type *ichnota*, M. (Brit. Guiana).
|| Duvita, Busck 1916.

Tin. Bazira, Walker 1864. (ACROLOPHUS, Poey).
Cat. XXX 1009 : type *xylinella*, Wlk. (Jamaica).

Lyonet. BEDELLIA, Stainton 1849.
Cat. Brit. Tin. Pter. p. 23 : type [*somnulentella*, Z.=] *orpheella*, Stt. (Europe).

Gel. Begoe, Chambers 1872. (TRICHOTAPHE, Clemens).
Canad. Entom. IV 209 : type *setosella*, Clem. (N. America).

Tortr. Begunna, Walker 1863. (SPARGANOTHIS, Hb.).
Cat. XXVII 189 : type *xanthoides*, Wlk. (N. America).

Gel. BELTHECA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 4-5 : type *picolella*, Busck. (Panama).
|| Anterethista, Meyr. 1914.

Aeg. BEMBECIA, Hübner 1820.
Verz. p. 128 : type *hylaeiformis*, Laspeyres. (Europe , N. Asia).
|| Pennisetia, Dehne 1850.
|| Anthrenoptera, Swinhoe 1892.

Gel. BESCIVA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 5 : type *longitudinella*, Busck. (Panama).

Ypon. BETHARGA, Walker 1865.
Cat. XXXIV 1154 : type *lycoides*, Wlk. (New Guinea).

Oec. Bida, Walker 1864. (CRYPTOLECHIA, Zeller).
Cat. XXIX 824 : type [*radiosella*, Wlk.=] *crambella*, Wlk. (S. E. Australia).

Oec. Binsitta, Walker 1864. (TONICA, Wlk.).
Cat. XXIX 832 : type *niviferana*, Wlk. (India).

Glyph. Birthana, Walker 1864. (IMMA, Wlk.).
Cat. XXXI 145 : type *consocia*, Wlk. (Moluccas).

Tin. Blabophanes, Zeller 1852. (MONOPIS, Hb.).
Linn. Ent. VI 100 : type *ferruginella*. Hb. (Europe ; N. Africa : Asia Minor).

Blast. BLASTOBASIS, Zeller 1855.
Linn. Ent. X 171 : type *phycidella*, Zeller. (Europe ; N. Africa).
|| Epistetus, Wlsm. 1894.
|| Ploiophora, Dietz 1900.
|| Zenodochium, Wlsm. 1908.
|| Prosthesis, Wlsm. 1908.

Cosm. Blastodacna, Wocke 1876. (CHRYSOCLISTA, Stainton).
Hein. Schmett. Deuts., Kleinschm. II. ii. 428-429 : type *hellerella*, Dup. (Europe).

Ypon. Blastotere, Ratzeburg 1840. (ARGYRESTHIA, Hb.).
Forst. Ins. II 240 : type [*illuminatella*, Zeller=] ***bergiella***, Ratz. (Europe).

Oec. Blepharocera, Chambers 1877 (*praeocc.*). (BORKHAUSENIA, Hb.).
Bull. U. S. Geol. Surv. III 144 : type ***haydenella***, Chambers (N. America).

Stigm. Bohemannia, Stainton 1859 (*praeocc.*). (SCOLIAULA, Meyr.).
Manual II 439 : type *quadrimaculella*, Boh. (Europe).

Carp. BONDIA, Newman 1856.
T. E. S. (n. s.) III 289 : type *nigella*, Newman. (E. Australia).

Schreck. BONIA, Walker 1862.
J. Linn. Soc. (Zool.) VI 83 : type ***unicolor***, Wlk. (Borneo).

Schreck. Boocara, Butler 1880. (STATHMOPODA, H. S.).
Cist. Entom. II 562 : type *skelloni*, Butler. (New Zealand).

Oec. BORKHAUSENIA, Hübner 1826.
Verz. p. 420 : type *minutella*, Linn. (Europe).
|| Denisia, Hb. 1826.
|| Amaurosetia, Stephens 1835.
|| Litoides, Bruand 1856.
|| Grassa, Bruand 1859.
|| Tingena, Wlk. 1864.
|| Blepharocera, Chambers 1877.
|| Cremnogenes, Meyr. 1884.
|| Proteromicta, Meyr. 1888.
|| Chambersia, Riley 1891.
|| Agnoea, Wlsm. 1907.
|| Pseudatemelia, Rebel 1910.
|| Tubulifera, Spuler 1910.
|| Hofmannophila, Spuler 1910.
|| Tubuliferola, Strand 1917.

Tin. Boviceras, Turati 1919. (CATABOLA, Durrant).
Nat. Sicil. XXIII 339-345, ff. 342 1-11 : type ***biskraella***, Rebel. (Algeria).

Crypt. BOYDIA, Newman 1856.
T. E. S. (n. s.) III 292 : type *criniferella*. Newm. (Australia).
|| Hypertricha, Meyr. 1890.

Crypt. Brachiloma, Clemens 1863. (STENOMA, Zeller).
Proc. Ent. Soc. Philad. II 126 : type ***unipunctella***, Clemens. (N. America).

Gel. BRACHMIA, Hübner 1826.
Verz. p. 119 : type *dimidiella*, Schiff. (Europe).
|| Ceratophora, Heinemann 1870 (*praeocc.*).
|| Cladodes, Hein. 1870.
|| Eudodacles, Snellen 1889.
|| Aulacomima, Meyr. 1904.

Glyph Brachodes, Guenée 1845. (ATYCHIA, Latreille).
Ann. S. E Fr. (2) III 311 : type *vernetella*, Gn. (S. W. Europe).

Gel. BRACHYACMA, Meyrick 1886.
T. E. S. 1886. 278-279 : type *epiochra*, M. (Fiji).
|| Lathontogenus, Wlsm. 1897.
|| Paraspistes, Meyr. 1905.
|| Lipatia, Busck 1910

Crypt. BRACHYBELISTIS, Turner 1902.
Tr. R. Soc. S. Austr. XXVI 195 : type *neomorpha*, Turner. (Queensland).

Gel. Brachycrossata, Heinemann 1870. (ACOMPSIA, Hb.).
Schmett. Deuts. Kleinschm. II i. 323-324 : type *cinerella*, Clerck. (Europe).

Tin. BRACHYDOXA, Meyrick 1917.
Exot. Micr. II 83 : type *syntrocha*. M. (Assam).

Gel. BRACHYERGA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 235 : type *hemiacma*, M. (Borneo

? Tortr. Brachygonia, Walsingham 1900. (? TORTRIX, Linn.).
A. M. N. H. (7) V 464 : type *angulicostana*, Wlsm. (Japan).
(" Agrees in neuration with *Tortrix*".).

Crypt. Brachyloma (See Brachiloma).

Oec. Brachynemata, Meyrick 1885. (NEPHOGENES, Meyr.)
P. Linn. Soc. N. S. W. IX 1045 : type *cingulata*, M. (Australia).
Brachynemata, Mey ., P. Linn. Soc. N. S. W. VII 423 (1883). (Invalid : no associated species).

Oec. Brachyplatea, Zeller 1877. (HYPERCALLIA, Stephens).
H. S. E. R. XIII 379, 383 : type *incensella*. Zeller. (S. America).

Oec. Brachysara, Meyrick 1883. (ATOMOTRICHA, Meyr.).
Proc. Linn. Soc. N. S. W. VIII 325 : type *sordida*, Butler. (New Zealand).
Brachysara, Meyr., P. Linn. Soc N. S. W. VII 424 (1883) (Invalid : no associated species).

Tin. BRACHYSYMBOLA, Meyrick 1912.
T. E. S. 1911. 718 type *sepulcralis*, M. (Argentina).

Eucosm. Brachytaenia, Stainton 1858. (ARGYROPLOCE, Hb.).
Manual II 190, 192 : type *semifasciana*, Hw. (Europe).
Brachytaenia Stephens, List. Brit. Anim. B. M. X 25 (1852) (*non-descr.*).

Incurv. Brackenridgia, Busck 1903 (*praeocc.*). (PARACLEMENSIA, Busck).
Proc. E. S. Wash. V 193 : type *acerifoliella*, Fitch. (N. America).
|| Breckenridgia, Dietz. 1905 (lapsus).

Glyph. BRENTHIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 172 : type *pavonacella*, Clem. (N. America).

Tin. BRIARAULA, Meyrick 1922.
Exot. Micr. II 590 : type *tholeropa*, M. (S. India).

Oec. BRIAROSTOMA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 290 : type *pyrrhopsamma*, M. (C. Colony).

Gel. BROCHOMETIS, Meyrick 1923.
Exot. Micr. II 625 : type *picrigramma*, M. (S. America).

Tin. Brosis, Hübner 1806 (*non-descr.*). (TINEA, Linn.).
Tentamen, p. 2 : type *granella*, L. (Europe).

Scythr. Bryophaga, Ragonot 1874. (SCYTHRIS, Hb.).
Bull. S. E. Fr. 1874, pp. ccxlii-ccxliii : type *acanthella*, Godart. (Europe).

Gel. Bryotropha, Heinemann 1870. (GELECHIA, Hb.).
Schmett. Deuts., Kleinschm. II i. 233-234 : type *terrella*, Schiff (Europe).

Diplos. BUBALOCERAS, Walsingham 1907.
Faun. Hawaii. I 548 : type *subeburneum*, Wlsm. (Hawaii).

Lyonet. BUCCULATRIX, Zeller 1839.
Isis XXXII 214 ; type [*boyerella*, Dup.=] *albedinella*, Zeller. (Europe).
|| Ceroclastis, Zeller 1848.

Alucit. Buckleria, Tutt 1905 (*non-descr.*). (TRICHOPTILUS, Wlsm.).
Ent. Rec. XVII 37 (*non-descr.*) : type *paludum*, Zeller. (Europe).

Glyph. BURLACENA, Walker 1864.
Cat. XXXI 80 : type *aegerioides*, Wlk. (New Guinea ; N. E. Australia).
|| Sesiomorpha, Snellen 1885.
|| Cibdeloses, Durrant 1919.

Glyph. Bursadella, Snellen 1880. (IMMA, Wlk.).
Midd. Sumatra IV (1) 8, p. 83 : type *dichroalis*, Snellen (Sumatra ; Burma).

Lyonet. Busckia, Dyar 1903. (PHILONOME, Chambers).
U. S. Nat. Mus. Bull. 52, p. 563 : type *luteella*, Chambers. (Colorado).

Scythr. Butalis, Treitschke 1833 (*praeocc.*). (SCYTHRIS, Hb.).
Eur. Schmett. IX ii. 108 : type *cuspidella*, Schiff. (Europe).

Ypon. Buxeta, Walker 1866. (LACTURA, Wlk.).
Cat. XXXV 1982 : type *conflagrans*, Wlk. (New Guinea).

Eucosm. Byrsoptera, Lower 1901. (POLYCHROSIS, Ragonot).
Tr. R. Soc. S. Austr. XXV 77 : type *xylistis*, Lower. (Queensland).

Tin. BYTHOCRATES, Meyrick 1919.
Exot. Micr. II 268 : type *drosocycla*, M. (Br. Guiana).

C

Gel. Caccelice, Busck. (HELICE, Chambers).
Jl. N. Y. Ent. Soc. X 93, t. 12 f. 2 : type [*pallidochrella*, Chambers=] *permolestella*, Busck. (Kentucky).

Lyonet. Cachura, Walker 1864. (OPOGONA, Zeller).
Cat. XXX 910 : type [*flavofasciata*, Stt.=] *objectella*, Wlk. (Ceylon ; India).

Eucosm. Cacocharis, Walsingham 1892. (ARGYROPLOCE, Hb.).
P. Z. S. 1891. 503 : type *albimacula*, Wlsm. (W. Indies).

Oec. Cacochroa, Heinemann 1870 (*praeocc.*). (CACOPHYIA, Rebel).
Schmett. Deuts. Kleinschm. II. i. 367 : type *permixtella*, H. S. (Europe.)

Eucosm. Cacochroea, Lederer 1859. (EUCOSMA, Hb.).
Wien. Ent. Mon. III 331, 337 : type *grandaevana*, Zeller. (Europe).

Tortr. CACOECIA, Hübner 1826.
Verz. p. 388 : type *xylosteana*, Linn. (Europe).
|| Ptycholoma, Stephens 1834.
|| Anacrusis, Zeller 1877.
|| Cryptoptila, Meyr. 1881.
|| Archips, Wlsm. 1900 : Hb. 1806 (*non-descr.*).

Gel. Cacogamia, Snellen 1903. (TISIS, Wlk.).
Tijds. Ent. XLVI 48 : type *elegans*, Snellen. (Java).

Lyonet. Caconome, Dyar 1903. (ACANTHOCNEMES, Chambers).
U. S. Nat. Mus. Bull. 52, p. 563 : type *fuscoscapulella*, Chambers. (Texas)

Oec. CACOPHYIA, Rebel 1901.
Cat. Lep. Pal. II 175: type *permixtella*, H. S. (S. Europe; Asia Minor).
|| Cacochroa, Heinemann 1870 (*praeocc.*).

Plut. CADMOGENES, Meyrick 1923.
Tr. N. Z. Inst. LIV 167-168: type *literata*, M. (New Zealand).

Tin. Caenogenes, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887. 140, 154-155: type *perrensella*, Wlsm. (Argentina).

Chlid. CAENOGNOSIS, Walsingham 1900.
Monogr. Christmas Isd. p. 79: type *incisa*, Wlsm. (Christmas Isd.).
|| Epirrhoeca, Meyr. 1911.

Crypt. CAENORYCTA, Meyrick 1922.
Entom. Mitteil. XI 45: type *dryoxantha*, Meyr. (New Guinea).

Ypon. CALAMOTIS, Meyrick 1918.
Exot. Micr. II 188: type *prophracta*, Meyr. (India).

Gel. CALAMOTYPA, Meyrick 1926.
Exot. Micr. III 272: type *exstans*, M. (E. Siberia).

Plut. Calantica, Zeller 1847 (*praeocc.*). (NIPHONYMPHA, Meyr.).
Isis XL 811: type [*dealbatella*, Zeller=] *albella*, Zeller. (S. Europe)

Aeg. CALASESIA, Beutenmuller 1899.
Jl. N. Y. Ent. Soc. VII 256: type *coccinea*, Beut. (New Mexico).

Schreck. CALICOTIS, Meyrick 1889.
Tr. N. Z. Inst. XXI 170: type *crucifera*, M. (N. Zealand; E. Australia).

Glyph. Callartona, Hampson 1893. (IMMA, Wlk.).
Fauna India, Moths I 233: type *purpurascens*, Hmp. (S. India; Ceylon).

Glyph. Callatolmis, Butler 1877. (SAGALASSA, Wlk.).
T. E. S. 1877. 348: type *coleoptrata*, Wlk. (S. America).

Tortr. CALLIBRYASTIS, Meyrick 1912.
Exot. Micr. I 13-14: type *pachnota*, M. (India).

Tin. CALLICERASTIS, Meyrick 1916.
Exot. Micr. I 599-600: type *stagmatias*, M. (Ceylon).

Oec. Callima, Clemens 1860. (SCHIFFERMUELLERIA, Hb.).
Proc. Acad. Nat. Sci. Philad. (May 1860), p. 166: type *argenticinctella*, Clem. (N. America).
nec *Kallima*, Westwood.

Eucosm. Callimosema, Clemens 1865. (EUCOSMA, Hb.).
Proc. Ent. Soc. Philad. V 141: type *circulana*, Hb. (N. America).

Gel. CALLIPRORA, Meyrick 1914.
T. E. S. 1914. 242-243 : type *pentagramma*, M. (Brit. Guiana).

Aeg. CALLISPHECIA, Le Cerf 1917.
Obth. Et.Lep. comp. XIV 367 : type *oberthuri*, Le Cerf. (Cameroons).
Callisphecia, Le Cerf. Obth. Et. Lep. comp. XII 13 (1916) (*non-descr.*).

Oec. Callistenoma, Butler 1883. (HYPERCALLIA, Stephens).
T. E. S. 1883. 79 : type [*ustimacula*, Zeller=] *zelleri*, Butler. (Chile).

Lith. CALLISTO, Stephens 1834.
Ill. Brit. Entom., Haust. IV 276-277 : type *guttea*, Hw. (Europe).
|| Parornix, Spuler 1910.
|| Ornix (nec Tr. 1833) Zeller 1839 et auct.

Oec. CALLITHAUMA, Turner 1900.
Tr. R. Soc. S. Austr. XXIV 15 : type *basilica*, Turner. (Queensland).

Aeg. CALLITHIA, Le Cerf 1917.
Obth. Et. Lep. comp. XIV 248 : type *oberthuri*, Le Cerf (New Guinea).
Callithea, Le Cerf, Obth. Et. Lep. comp. XII 9 (1916) (*non descr.*).

Ypon. CALLITHRINCA, Meyrick 1913.
Exot. Micr. I 140 : type *evocatella*, Wlk. (Borneo).

Cosm. Callixestis, Meyrick 1917. (LIMNAECIA, Stainton).
Exot. Micr. II 41 : type *cassandra*, M. (Ceylon).

Oec. CALLIZYGA, Turner 1894.
Tr. R. Soc. S. Austr. XVIII 132 : type *dispar*, Turner. (Queensland).

Lith. CALOPTILIA, Hübner 1826.
Verz. p. 427 : type [*stigmatella*, Fb.=) *upupaepennella*, Hb. (Europe).
|| Poeciloptilia, Hb. 1826.
|| Gracillaria, Hw. 1828.
|| Ornix, Tr. 1833 (nec *Ornix*, Zeller 1839 : see *Callisto*, Stephens).
|| Euspilapteryx, Stephens 1835.
|| Coriscium, Zeller 1839.
|| Antiolopha, Meyr. 1894.
|| Aspilapteryx, Spuler 1910.
|| Xanthospilapteryx, Spuler 1910.

Eucosm. Calosetia, Stainton 1859. (EUCOSMA, Hb.).
Manual II 271 : type *nigromaculana*, Hw. (Europe).

Blast. Calosima, Dietz 1910. (HOLCOCERA, Clemens).
Tr. Am. E. S. XXXVI 21: type *argyrosplendella*, Dietz. (East U. S. America).

Tin. Calostinea, Dietz 1905. (HOMOSETIA, Clemens).
Tr. Am. E. S. XXXI 79: type *argentinotella*, Chambers. (Kentucky; Florida).

Eperm. Calotripis, Hübner 1826. (EPERMENIA, Hb.)
Verz. pp. 424-425: type *illigerella*, Hb. (Europe).

Schreck. CALYCOBATHRA, Meyrick 1891.
E. M. M. XXVII 59: type *acarpa*, M. (Algeria).

Gel. Calyptrotis, Meyrick 1891. (APATETRIS, Stdgr.).
E. M. M. XXVII 56: type *alphitodes*, M. (Algeria).

Aeg. Camaegeria, Strand 1914. (CONOPIA, Hb.).
Arch. Naturg. LXXX A. 1, pp. 48-49: type *auripicta*, Strand (Cameroons).

Lith. Cameraria, Chapman 1902. (LITHOCOLLETIS, Hb.).
Entom. XXXV 141: type *guttifinitella*, Clemens. (U. S. America).

Eucosm. CAMPTRODOXA, Meyrick 1925.
Exot. Micr. III 144: type *inclyta*, M. (Natal).

Tortr. CANCANODES, Meyrick 1922.
Exot. Micr. II 498: type *orthometalla*, M. (Fiji).

Gel. CANTHONISTIS, Meyrick 1922.
Zool. Meded. VII 82: type *amphicarpa*, M. (Java).

Schreck. CAPANICA, Meyrick 1917.
Exot. Micr. II 63: type *astrophanes*, M. (Brit. Guiana).

Adel. Capillaria, Haworth 1828. (ADELA, Latr.).
Lep. Brit., p. 519: type *viridella*, Scopoli. (Europe).

Crypt. CAPNOLOCHA, Meyrick 1925.
Exot. Micr. III 152: type *praenivalis*, M. (New Guinea).

Tortr. CAPNOPTYCHA, Meyrick 1920.
Exot. Micr. II 323: type *ipnitis*, M. (Queensland).

Aluc. Capperia, Tutt 1906. (OXYPTILUS, Zeller).
Brit. Lep. V 470 471: type *heterodactylus*, Vill. (Europe).
Capperia, Tutt, Ent. Rec. XVII 37 (1905) (*non descr.*).

Tortr. Capua, Stephens 1834. (EPAGOGE, Hb.)
Ill. Brit. Entom., Haust. IV 171: type [*favillaceana* Hb =] *ochraceana*, Stephens. (Europe).

Gel. CARBATINA, Meyrick 1913.
B. J. XXII 181: type *picrocarpa*, M. (Assam; Japan).

Oec. CARCINA, Hübner 1826.
Verz. p. 410 : type *quercana*, Fab. (Europe).
|| Phibalocera, Stephens 1834.

Aeg. Carmenta, Henry-Edwards 1881. (SYNANTHEDON, Hb.).
Papilio I 184 : type *pyralidiformis*, Wlk. (N. America).

Gel. Carna, Walker 1864. (DICHOMERIS, Hb.).
Cat. XXX 1038 : type *punctatella*, Wlk. (Brazil).

Gel. CARODISTA, Meyrick 1926.
Wyts Gen. Ins., fasc. 184, p. 224 : type *flagitiosa*, M. (Nyasaland).

Eucosm. Carpocapsa, Treitschke 1830. (ENARMONIA, Hb.).
Schmett. Eur. VIII 160 : type *pomonella*, Linn. (Europe; N. America, etc.).
Carpocapsa, Tr., Schmett. Eur. VII 231 (1829) (*non-descr.*).

Carp. CARPOSINA, Herrich-Schäffer 1853.
Schmett. Eur. V 38, t. 12 ff. 1, 2 : type *berberidella*, H. S. (S. E. Europe; Asia Minor).
|| Enopa, Wlk. 1866.
|| Oistophora, Meyr. 1881.
|| Heterocrossa, Meyr. 1882.

Eucosm. Cartella, Stainton 1858. (EUCOSMA, Hb.).
Manual II 216 : type *bilunana*, Hw. (Europe).
Cartella, Steph., List Brit. Anim. B. M. X 40 (1852) (*non-descr.*).

Gel. CARTERICA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 223 : type *phthoneropa*, M. (China).

Ypon. Carthara, Walker 1866 (*praeocc.*). (ATTEVA, Wlk.).
Cat. XXXV 1871-1872 : type *flavivitta*, Wlk. (S. America).

Tin. Casape, Walker 1864. (MYRMECOZELA, Zeller.).
Cat. XXIX 786 : type *pauculella*, Wlk. (C. & S. America).

Eupist. Casas, Wallengren 1881. (EUPISTA, Hb.).
Ent. Tidskr. II 95-96 : type *leucapennella*, Hb. (Europe).

Eupist. Casigneta, Wallengren 1881. (? EUPISTA, Hb.).
Ent. Tidskr. II 96 : type (?).

Oec. CASMARA, Walker 1863.
Cat. XXVIII 518 : type *infaustella*, Wlk. (N. India).

Schreck. Castorura, Meyrick 1886. (ERETMOCERA, Zeller).
Pr. Linn. Soc. N. S. W. XI 1047 : type *chrysias*, M. (E. Australia).

Tin. CATABOLA, Durrant 1913.
Novit. Zool. XX 142 : type *biskraëlla*, Rebel. (Algeria).
Boviceras, Turati 1919.

Blast. Catacrypsis, Walsingham 1907. (HOLCOCERA, Clemens).
Proc. U. S Nat. Mus. XXXIII 206: type *nucella*, Wlsm. (Colorado).

Lyonet. CATALECTIS, Meyrick 1920.
Exot. Micr. II 362: type *pharetropa*, M. (Fiji).

Gel. CATALEXIS, Walsingham 1909.
Biol. Centr. Am., Het. IV 19, f. 5: type *tapinota*, Wlsm. (Guatemala).

Tortr. CATAMACTA, Meyrick 1911.
Tr. N. Z. Inst. XLIII 81: type *gavisana*, Wlk. (New Zealand).

Gel. CATAMECES, Turner 1919.
Proc. R. Soc. Queensl. XXXI 122: type *thiophara*, Turner (Queensland).

Crypt. Catamempsis, Walsingham 1907. (THYROCOPA, Meyr.).
Faun. Hawaii. I 491: type *decipiens*, Wlsm. (Hawaii).

Eperm. CATAPLECTICA, Walsingham 1894.
E. M. M. XXX 199: type *farreni*, Wlsm. (England).
|| Heydenia, Hofmann 1868 (*praeocc.*).

Tin. CATAPSILOTHRIX, Rebel 1908.
Zool. Jahrb. Syst. XXVII 287: type *klaptoczi*, Rebel (Tripoli).

Crypt. Catarata, Walsingham 1912. (STENOMA, Zeller).
Biol. Centr. Am., Het. IV 154: type *lepisma*, Wlsm. (Panama).

Eucosm. Catastega, Clemens 1861. (EUCOSMA, Hb.).
Proc. E. S. Philad. I 86: type *aceriella*, Clemens (N. America).

Elach. CATATINAGMA, Rebel 1903.
Verh. z-b. Wien. LIII 94: type *trivittellum*, Rebel (Hungary).

Gel. CATELAPHRIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 182: type *torrefacta*, M. (Transvaal)

Lyonet. CATERISTIS, Meyrick 1889.
Tr. N. Z. Inst. XXI 164: type *eustyla*, M. (New Zealand)

Incurv. CATHALISTS, Meyrick 1917.
Ann. S. Afr. Mus. XVII 14: type *orinephela*, M. (C. Colony).

Gel. Cathegesis, Walsingham 1910. (ACOMPSIA, Hb.).
Biol. Centr. Am., Het. IV 27, f. 7: type *vinitincta*, M. (C. America)

Coprom. CATHELOTIS, Meyrick 1926.
Exot. Micr. III 241-242: type *sanidopa*, M. (Colombia).

Eucosm. Catoptria, Stainton 1858 (*praeocc.*). (EUCOSMA, Hb.).
Manual II 209: type [*cana*, Hw. =] *scopoliana*, Stt. (Europe)
Catoptria, Guenée, Ann. S. E. Fr. (2) III 187 (1845) (*non-descr.*).
nec *Catoptria*, Hb. 1826.

Gel. CATOPTRISTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 134 : type *trissoxantha*, M. (S. America).

Crypt. CATORYCTIS, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 42 : type *subparallela*, Wlk. (N. S. Wales).

Adel. Cauchas, Zeller 1839. (ADELA, Latreille).
Isis XXXII 186 : type *fibulella*, Schiff. (Europe).

Plut. Caulobius, Duponchel 1838. (ORTHOTAELIA, Stephens).
Ann. S. E. Fr. VII 134-135 : type *sparganella*, Thnbg. (Europe).

Plut. Caunaca, Wallengren 1880. (PLUTELLA, Schrank).
Ent. Tidskr. I 56 -57 : type *annulatella*, Curtis (Europe).

Glyph. CEBYSA, Walker 1854.
Cat. II 486 : type *leucotelus*, Wlk. (E. Australia).
|| Pitane, Walker 1854.
|| Sezeris, Wlk. 1863.
|| Oecinea, Scott 1865.
|| Polyploca, Wlgn. 1861. (nec Hb. 1826).

Oec. CECIDOLECHIA, Strand 1911.
Berlin. Ent. Zeitschr. LV 172 : type *maculicostella*, Strand. (Argentina).

Gel. Cecidophaga, Walsingham 1911. (APATETRIS, Stdgr.).
E. M. M. XLVII 189 : type *tamaricicola*, Wlsm. (Algeria).

Ypon. CECIDOSES, Curtis 1835.
P. Z. S. III 19-20 : type *eremita*, Curtis (Monte Video).
|| Clistoses, Kieffer 1910.
? || Eucecidoses, Brèthes 1917.
? || Oliera, Brèthes 1917.

Ypon. CEDESTIS, Zeller 1839.
Isis XXXII 204 : type *farinatella*, Duponchel (Europe).
|| Dyscedestis, Spuler 1910.

Tin. CELESTICA, Meyrick 1917.
Exot. Micr. II 79 : type *angustipennis*, H. S. (Europe).

Gel. CELETODES, Meyr. 1921.
Zool. Meded. VI 166 : type *dracopis*, M. (Java).

Eucosm. Celypha, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz. pp. 381-382 : type [*striana*, Schiff.=] *rusticana*, Hb. (Europe).
|| *Celypa*, Pierce, Genit. Brit. Tortr., p. 50 (1922) (*lapsus*).

Lyonet. Cemiostoma, Zeller 1848. (LEUCOPTERA, Hb.).
Linn. Ent. III 272-273, t. 2 ff. 35-39 : type *spartifoliella*, Hb. (Europe).

Metachand. CENARCHIS, Meyrick 1924.
T. E. S. 1923, 549 : type *vesana*, M. (Rodriguez).

Tortr. Cenopis, Zeller 1875. (SPARGANOTHIS, Hb.).
Verh. z-b. Ges. Wien. XXV 239-240 : type *pettitana*, Robinson (Atlantic States).

Oec. Cephalispheira, Bruand 1859. (CRYPTOLECHIA, Zeller).
Ann. S. E. Fr. XXVII 633-634 : type *ferrugella*, Schiff. (Europe).
Cephalispheira, Brd., Cat. Lep. Doubs, p. 72 (1847) (*non-descr*.)

Tin. Cephimallota, Bruand 1847. (TINEA, Linn.).
Cat. Microlep. Doubs, p. 66 : type *simpliciella*, H. S. (Europe).

Tortr. CERACE, Walker 1863.
Cat. XXVIII 422 : type *stipatana*, Wlk. (India ; China).
|| Pentacitrotus, Butler 1881.

Oec. CERANTHES, Meyrick 1918.
Ann. Transv. Mus. VI 33 : type *thiota*, M. (Zululand).

Eucosm. Cerata, Pierce 1922. (ENARMONIA, Hb.).
Genit. Brit. Tortr., p. 87 : type *servillana*, Dup. (Europe).
Cerata, Steph., List Brit. Anim. B. M. X 77 (1852) (*non-descr.*).

Aeg. Ceratocorema, Hampson 1893. (TINTHIA, Wlk.).
Fauna India, Moths I 200, f. 128 : type *posteristata*, Hmp. (India).

Gel. Ceratophora, Heinemann 1870 (*praeocc.*). (BRACHMIA, Hb.).
Schmett. Deuts., Kleinschm. II i. 325 : type *rufescens*, Hw. (Europe).

Ypon. CERATOPHYSETIS, Meyrick 1887.
Pr. Linn. Soc. N. S. W. XI 1044-1045 : type *sphaerosticha*, M. (Queensland).

Crypt. .CERCONOTA, Meyrick 1915.
Exot. Micr. I 385-386 : type *tridesma*, M. (Brit. Guiana).

Lyonet. Ceroclastis, Zeller 1848. (BUCCULATRIX, Zeller).
Linn. Ent. III 295, t. 2, f. 47 : type *nigricomella*, Z. (Europe).

Adel. CEROMITIA, Zeller 1852.
Micr. Caffr. p. 92 : type *wahlbergi*, Zeller. (S. Africa).
|| Agisana, Möschler 1883.

Tortr. Cerorrhineta, Zeller 1877. (PLATYNOTA, Clemens).
H. S. E. R. XIII 116 : type *calidana*, Zeller (Cuba).

Plut. Cerostoma, Latreille 1802. (YPSOLOPHUS, Fabr.).
Hist. Nat. Ins. Crust. III 416 : type (?) [*vittella*, L.=] *dorsatus*, Fb. (Europe).
(*Note.* Type cited as *xylostella*, Linn., by Curtis 1832).

Gel. CERYCANGELA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 134 : type *sacricola*, M. (S. America).

Oec. Cerycostola, Meyrick 1902. (SCORPIOPSIS, Turner).
Tr. R. Soc. S. Austr. XXVI 163 : type *pyrobola*, M. (E. Australia).

Gel. CEUTHOMADARUS, Mann 1864.
Wien. Ent. Mon. VIII 188 : type *tenebrionellus*, Mann. (Asia Minor ; N. Persia).

Plut. Chaetochilus, Stephens 1834. (YPSOLOPHUS, Fabr.).
Ill. Brit. Entom., Haust. IV 337 : type *sequella*, Clerck (Europe).

Crypt. Chalarotona, Meyrick 1890. (PHTHONERODES, Meyr.).
Tr. R. Soc. S. Austr. XIII 64-65 : type *intabescens*, M. (N. S. Wales).

Incurv. CHALCEOPLA, Braun 1921.
Proc. Acad. Nat. Sci. Philad. LXXIII 20 : type *cyanella*, Busck (N. America).
|| Cyanauges, Braun 1919 (*praeocc.*).

Oec. CHALCOCOLONA, Meyrick 1921.
Ann. Transv. Mus. VIII 104 : type *cyananthes*, M. (Rhodesia)

Amph. CHALCOTEUCHES, Turner 1927.
Proc. R. Soc. Tasmania 1926. 159-160 : type *phlogera*, Turner (Tasmania).

Gel. CHALINIASTIS, Meyrick 1904.
Proc. Linn. Soc. N. S. W. XXIX 301-302 : type *astrapaea*, M. (Queensland).

Ypon. Chalybe, Duponchel 1836. (ETHMIA, Hb.).
Lép. France X 296 : type *aurifluella*, Hb. (Europe).

Aeg. Chamaesphecia, Spuler 1910. (CONOPIA, Hb.).
Schmett. Eur. II 311, f. 91 : type *empiformis*, Esper (Europe).

Aeg. CHAMANTHEDON, Le Cerf. 1917.
Obth. Et. Lep. comp. XIV 287 : type *hypochroma*, Le Cerf. (Burma).
Chamanthedon, Le Cerf., Obth. Et. Lep. comp. XII 12 (1916) (*non-descr.*).

Oec Chambersia, Riley 1891. (BORKHAUSENIA, Hb.).
Smith's List Lep. Bor. Am., p. 103 : type *haydenella*, Chambers (N. America).

Metachand. CHANYSTIS, Meyrick 1911.
Tr. Linn. Soc. (2) XIV 281 : type *syrtopa*, M. (Seychelles).

Eriocr. Chapmania, Spuler 1910 (*praeocc.*). (ERIOCRANIA, Zeller).
Schmett. Eur. II 483 (*non-descr.*) : type *semipurpurella*. Stephens. (Europe).

Ypon. CHARICRITA, Meyrick 1913.
Exot. Micr. I 143 : type *citrozona*, M. (Queensland).
Charicrata, Turner, Tr. R. Soc S. Austr. XLVII 168 (1923) (*lapsus*).

Oec. CHARIPHYLLA, Meyrick 1921.
Exot. Micr. II 387 : type *closterias*, M. (Peru).

Gel. CHARISTICA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 133 : type *rhodopetala* M. (Brazil).

Glyph. CHARIXENA, Meyrick 1920.
Entom. LIII 279 : type *iridoxa*, M. (New Zealand).
|| Philpottia, Meyr. 1916 (*praeocc.*).

Eperm. Chauliodus, Treitschke 1833 (*praeocc.*). (EPERMENIA Hb.).
Schmett. Eur. IX ii. 31 : type *pontificella*, Hb. (Europe)

Tortr. Cheimaphasia, Curtis 1833. (EXAPATE, Hb.).
Ent. Mag. I 190 : type *congelatella*, Clerck. (Europe).

Tortr. Cheimatophila, Stephens 1834. (PERONEA, Curtis).
Ill. Brit. Entom., Haust. IV 192 : type [*mixtana*, Hb.=] *castaneana*, Hw. (Europe).
Cheimatophila, Steph., Cat. Brit. Ins. II 189 (1829) (*non-descr.*).

Tortr. Cheimatophila (nec Steph. 1834), Herrich-Schaffer 1851. (TORTRICODES, Stainton).
Schmett. Eur. IV 287, t. 7, ff. 14, 38 : type [*tortricella*, Hb =] *hyemana*, Hb. (Europe).

Tortr. Cheimonophila, Duponchel 1838. (EXAPATE, Hb.).
Ann. S. E. Fr. VII 131-132 : type [*congelatella*, Cl.=] *gelatella*, L (Europe).

Oec. CHEIMOPHILA, Hübner 1826.
Verz. pp. 402-403 : type *salicella*, Hb (Europe).
|| Dasystoma, Curtis 1833.
|| Lemmatophila, Dup. 1838 (nec Tr. 1832).

Gel Chelaria, Haworth 1828. (HYPATIMA, Hb.).
Lep. Brit., p. 526 : type *hubnerella*, Don.=*conscriptella*, Hb. (Europe.)

Crypt. CHEREUTA, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 33: type *tinthalea*, M. (Australia).

Oec. CHERSADAULA, Meyrick 1923.
Tr. N. Z. Inst. LIV 165: type *ochrogastra*, M. (New Zealand).

Tin. Chersis, Guenée 1845. (TALEPORIA, Hb.).
Ann. S. E. Fr. (2) III 339: type [*casanella*, Ev.=] *tauridella*, Gn. (Europe).

Gel. CHERSOGENES, Walsingham 1908.
P. Z. S. 1907. 947: type *victimella*, Wlsm. (Tenerife).
|| Epanastasis, Wlsm. 1908.

Coprom. CHERSOMORPHA, Meyrick 1926.
Exot. Micr. III 243: type *taospila*, M. (New Ireland).

Oec. CHEZALA, Walker 1864.
Cat. XXIX 787: type [*privatella*, Wlk.=] *allatella*, Wlk. (Australia).
|| Peltophora, Meyr. 1884 (*praeocc.*).
|| Pempeltias, Kirkaldy 1910.

Lith. CHILOCAMPYLA, Busck 1900.
Proc. U. S. Nat. Mus. XXIII 248, t. 1, f. 15: type *dyariella*, Busck (Florida).

Eucosm. Chiloides, Butler 1881. (BACTRA, Stephens).
A. M. N. H. (5) VII 392: type *straminea*, Butler. (Hawaii).

Gel. CHILOPSELAPHUS, Mann 1867.
Verh. z.-b. Ges. Wien XVII 849: type *fallax*, Mann. (Hungary).
Chilopsephalus, Rebel, 1901 (*emend.*).

Oec. Chimabache, Hübner 1826. (DIURNEA, Hw.).
Verz. p. 402: type *fagella*, Fabr. (Europe).
Chimabacche, Zeller et auct.

Glyph. Chimaera, Ochsenheimer 1808 (*praeocc.*). (PHYCODES, Guenee).
Schmett. Eur. II 2: type *radiata*, Ochs. (India).

Aeg. CHIMAEROSPHECIA, Strand 1915.
Arch. f. Naturg. LXXXI (A. 8), p. 46: type *aegerides*, Strand (Formosa).

(Description not available; perhaps a Synonym).

Gel. Chionodes, Hübner 1826. (GELECHIA, Hb.).
Verz. p. 420: type *lugubrella*, Fabr. (Europe).

Ypon. CHIONOGENES, Meyrick 1913.
Exot. Micr. I 144: type *isanema*, M. (Tasmania).

Tin. CHIONOREAS, Meyrick 1926.
Sarawak Mus. Jl. III 165 : type *euryochtha*, M. (Borneo).

Oec. Chirocompa, Meyrick 1914. (BATIA, Stephens).
Exot. Micr. I 230 : type *lunaris*, Hw. (Europe ; Asia Minor).

Crypt. CHLAMYDASTIS, Meyrick 1916.
Exot. Micr. I 481 : type *lactis*, Busck. (French Guiana).

Tin. CHLIAROSTOMA, Meyrick 1913.
Ann. Transv. Mus. III 335 : type *relecta*, M. (Transvaal).

Chlid. CHLIDANOTA, Meyrick 1906.
B. J. XVII 412-413 : type *thriambis*, M. (Ceylon).

Phal. CHLIDONIA, Hübner 1826.
Verz. p. 393 : type [*hartmanniana*, Cl.=] *baumanniana*, Schiff. (Europe).

Gel. CHLOROLYCHNIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 241-242 : type *agnatella*, Wlk. (India.)

Plut. CHLOROPHYTIS, Meyrick 1912.
Ann. S. Afr. Mus. X 71 : type *secura*, M. (Zululand).

Cosm. Cholotis, Meyrick 1911. (ASCALENIA, Wocke).
Tr. Linn. Soc. (2) XIV 284 : type *semnostola*, M. (Australia ; India ; Africa).

Glyph. Chordates, Snellen 1877. (TORTYRA, Wlk.).
Tijds. Ent. XX 49 : type *pronubana*, Snellen (Java ; Celebes).

Glyph. Choregia, Zeller 1877. (TORTYRA, Wlk.).
H. S. E. R. XIII 191-192 : type *fulgens*, Felder (S. America).

Glyph. Choreutidia, Sauber 1902. (CHOREUTIS, Hb.).
Semper's Schmett. Philipp. II 702 : type *sexfasciella*, Sauber (Philippines).

Glyph. CHOREUTIS, Hübner 1826.
Verz., p. 373 : type [*myllerana*, Fabr.=] *scintilulana*, Hb. (Europe ; Asia Minor).
Choreutes, Sodoffsky 1837 (emend.).
|| Porpe, Hubner 1826.
|| Millieria, Ragonot 1874.
|| Ripismia, Wocke 1876.
|| Choreutidia, Sauber 1902.

Tortr. Choristoneura, Lederer 1859. (TORTRIX, Linn.)
Wien. ent. Mon. III 242, 246 : type *diversana*, Hb. (Europe).

Lyonet. CHOROCOSMA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 560: type *melanorma*, M. (N. S. Wales).

Oec. CHORONOMA, Meyrick 1926.
Exot. Micr. III 317 : type *isoxysta*, M. (Transvaal).

Lyonet. CHOROPLECA, Durrant 1914.
Biol. Centr. Am., Het. IV 366 : type *visaliella*, Chambers (N. America).
|| Cyane, Chambers 1873 (nec Felder 1861).

Tortr. CHRESMARCHA, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 219: type *sibyllina*, M. (New Guinea).

Tin. Chrestotes, Butler 1881 (*praeocc.*). (LINDERA, Blanchard).
A. M. N. H. (5) VII 401 : type *tessellatella*, Blanchard (S. America ; Australia, etc.).

Phal. Chrosis, Stainton 1859. (PHALONIA, Hb.).
Manual II 268 : type (*aleella*, Schulze=] *tesserana*, Treits. (Europe).
Chrosis, Guenée, Ann. S. E. Fr. (2) III 300 (1845) (*non-descr.*).

Oec. Chrysia, Milliere 1854. (SCHIFFERMUELLERIA, Hb.).
Ann. S. E. Fr. XXIII 61 : type *grandis*, Desvignes. (Europe).
nec *Chrysia*, Bruand 1845 (? descr.).

Ypon. Chrysitella, Zeller 1839. (ROESLERSTAMMIA, Zeller).
Isis XXXII 203 : type [*erxlebella*, Fb.=] *erxlebeniella*, Zeller (Europe).

Glyph. CHRYSOCENTRIS, Meyrick 1914.
Exot. Micr. I 284 : type *clavaria*, M. (Nyasaland).

Cosm. CHRYSOCLISTA, Stainton 1851.
Ins. Brit. Tin., pp. 240-241, t. 7, ff. 9 a c : type *linneella*, Clerck (Europe ; New York).
|| Glyphipteryx, Curtis 1827 (*praeocc.*).
|| Blastodacna, Wocke 1876.
|| Spuleria, Hofmann 1897.
|| Sorhagenia, Spuler 1910.

Schreck. Chrysocorys, Curtis 1833. (SCHRECKENSTEINIA, Hb.).
Ent. Mag. I 191 : type *festaliella*, Hb. (Europe).

Schreck. CHRYSOESTHIA, Hübner 1826.
Verz. p. 422 : type *roesella*, Linn. (Europe).
|| Heliodines, Stainton 1854.
|| Aetole, Chambers 1875.
|| Lithariapteryx, Chambers 1876.

Oec. CHRYSONOMA, Meyrick 1914.
Exot. Micr. I 251: type *fascialis*, Fabr. (E. Australia; New Guinea).

Cosm. CHRYSOPELEIA, Chambers 1874.
Canad. Entom. VI 72: type *purpuriella*, Chambers. (Kentucky).
|| Aeaea, Chambers 1874.
(nec Chrysopelea, Boie 1827– Reptilia).

Gel. Chrysopora, Clemens 1860. (ARISTOTELIA, Hb.).
Proc. Acad. Nat. Sci. Philad., p. 362: type *lingulatella*, Clemens (Atlantic States).

Tin. Chrysoryctis, Meyrick 1886. (TINEA, Linn.).
A. M. N. H. (5) XVII 530: type *irruptella*, Wlk. (S. E. Australia).

Tortr. CHRYSOXENA, Meyrick 1912.
T. E. S. 1911, 685: type *auriferana*, Busck (Brazil; Florida).

Schreck. CHRYSOXESTIS, Meyrick 1921.
Zool. Meded. VI 176: type *lauta*, M. (Java).

Glyph. Cibdeloses, Durrant 1919. (BURLACENA, Wlk.).
Novit. Zool. XXVI 121: type *dolopis*, Durrant (Assam).

Aeg. Cicinnocnemis, Holland 1894. (TOOSA, Wlk.).
Jl. N. Y. Ent. Soc. I 181, figs.: type [*plumipes*, Drury=] *cornuta*, Holland (W. Africa).

Aeg. Cicinnoscelis, Holland 1894. (ALONINA, Wlk.).
Jl. N. Y. Ent. Soc. I 182-183, fig.: type *longipes*, Holland (W. Africa).

Tin. Cimitra, Walker 1864. (HAPSIFERA, Zeller).
Cat. XXIX 779-780: type *seclusella*, Wlk. (Ceylon).

Glyph. Circica, Meyrick 1888. (GLYPHIPTERIX, Hb.).
Tr. N. Z. Inst. XX 88: type *cionophora*, M. (New Zealand).

Ypon. Circostola, Meyrick 1889. (ZELLERIA, Stainton).
Tr. N. Z. Inst. XXI 163: type *copidtoa*, M. (New Zealand).

Plut. CIRCOXENA, Meyrick 1916.
Tr. N. Z. Inst. XLVIII 418: type *ditrocha*, M. (New Zealand).

Gel. Cirrha, Chambers 1872. (GELECHIA, Hb.).
Canad. Entom. IV 146: type *albisparsella*, Chambers (N. America).

Oec. CITHARODICA, Meyrick 1914.
Exot. Micr. I 272-273: type *minyra*, M. (Queensland).

Lyonet. CLADARODES, Meyrick 1910.
Rec. Ind. Mus. V 229-230: type *peloptera*, M. (India).

Blast CLADOBROSTIS, Meyrick 1921.
Exot. Micr. II 409-410: type *melitricha*. M. (N. India).

Gel. Cladodes, Heinemann 1870 (*praeocc.*). (BRACHMIA, Hb.)
Schmett. Deuts., Kleinschm. II, i. 330: type *dimidiella*, Schiff. (Europe).

Crypt. CLADOPHANTIS, Meyrick 1918.
Ann. Transv. Mus. VI 33-34: type *xylophracta*, M. (Zululand).

Cosm. CLEMMATISTA, Meyrick 1921.
Exot. Micr. II 414: type *metacirrha*, M. (India).

Gel. Cleodora, Stephens 1834 (*praeocc.*). (METZNERIA, Zeller).
Ill. Brit. Entom., Haust. IV 220: type *lappella*, Linn. (Europe; W. Asia; N. America).

Gel. Cleodora, Stainton 1854 (nec Steph.). (PALTODORA, Meyr.).
Ins. Brit. Tin., p. 142, t. 4, ff. 7 [a-c]: type *cytisella*, Curtis (Europe).

Tortr. Clepsis, Stainton 1858. (TORTRIX, Linn.).
Manual II 197: type *rusticana*, Tr. (Europe).
Clepsis, Guenée, Ann. S. E. Fr. (2) III 168 (1845) (*non-descr.*).

Tin. CLEPTICODES, Meyrick 1927.
Exot. Micr. III 332: type *horocentra*, M. (Natal).

Crypt. Clerarcha, Meyr. 1890. (PHTHONERODES, Meyr.).
Tr. R. Soc. S. Austr. XIII 53: type *agana*, M. (Australia).

Gel. Clerogenes, Meyr. 1921. (OECOGONIA, Stainton).
Ann. Transv. Mus. VIII 93: type *meledantis*, M. (C. Colony).

Elach. CLEROPTILA, Meyrick 1914.
Exot. Micr. I 204: type *chelonitis*, M. (Nyasaland).

Ypon. Clistoses, Kieffer 1910. (CECIDOSES, Curtis).
Central blatt. Bakt. (2) XXVII 381: type *artifex*, Kieffer (Argentina).

Gel. CLISTOTHYRIS, Zeller 1877.
H. S. E. R. XIII 330-331, t. 4 ff. 104 [a, b]; type *villosula*, Zeller (Colombia).

Oec. CLONITICA, Meyrick 1914.
Exot. Micr. I, 223: type *cusarca*, M. (S. Australia).

Clymene, Chambers 1873 (*praeocc.*).
Canad. Ent. V 114: type *aegerfasciella*, Chambers.

[*Note.* Belongs to Trichoptera.]

Phal. CLYSIA, Hübner 1826.
Verz. p. 409: type *ambiguella*, Hb. (Europe; Asia Minor).

Aluc. Cnaemidophorus, Wallengren 1862. (PLATYPTILIA, Hb.).
K. Svensk. Vet. Akad. III, No. 7, p 10: type *rhododactyla*, Fb (Europe; Kashmir; N. America).

Gel. CNAPHOSTOLA, Meyrick 1918.
Exot Micr. II 131 : type *adamantina*, M. (Assam).

Oec. CNEMIDOLOPHUS, Walsingham 1881.
T. E. S. 1881, 275 : type *lavernellus*, Wlsm. (E. and S. Africa).

Tortr. CNEPHASIA, Curtis 1826.
Brit. Entom. III 100 : type [*pasivana*, Hb.=] "*logiana*, Linn.". Curtis. (Europe).
|| Ablabia, Hb. 1826.
|| Nephodesme, Hb. 1826.
|| Sciaphila, Treits 1830.
|| Argyroptera, Dup. 1831.
|| Trachysmia, Guenée 1845 (*non descr.*).
|| Sphaleroptera, Stainton 1859 : Guenée 1845 (*non-descr.*).
|| Dipterina, Meyr. 1881.
? || Microcorses, Wlsm. 1900.

Arrhen. CNISSOSTAGES, Zeller 1863.
Stett. ent. Ztg. XXIV 147 : type *oleagina*, Zeller (Venezuela).

Eucosm. COCCOTHERA, Meyrick 1914.
Ann. Transv. Mus. IV 189 : type *spissana*, Zeller (S. Africa).

Eucosm. Coccyx, Treitschke 1830. (EVETRIA Hb.).
Schmett. Eur. VIII 126 : type [*turionella*, L.=] *turionana*, Hb. (Europe).
Coccyx, Tr., Schmett. Eur. VII 230 (1829) (*non-descr.*).

Tin. Cochleophasia, Curtis 1834. (TALEPORIA, Hb.).
Brit. Entom. XI. expl. tab. 487 : type [*tubulosa*, Retz.=] *tessellea*, Hw., Curtis. (Europe).

Phal. Cochylis, Treitschke 1830. (PHALONIA, Hb.).
Schmett. Eur. VIII 272 : type [*roseana*, Hw.=] *rubellana*, Hb. (Europe).
Conchylis, Treits., Schmett. Eur. VII 233 (1829) (*non-descr.*).

Lyonet. COELIOMETOPA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 181 : type *hypolampes*, Turner (Queensland).

Elach. COELOPOETA, Walsingham 1907.
Proc. U. S. Nat. Mus. XXXIII 217-218 : type *glutinosi* Wlsm. (N. America).

Tortr. COELOSTATHMA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 355 : type *discopunctana*, Clemens (N. America).

Oec. COERANICA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 759-760 : type *isabella*, Newman (E. Australia).
Coeranica, Meyr., P. Linn. Soc. N. S. W. VII 420 (1883) (Invalid ; no associated species).

Oec. Coesyra, Meyrick 1884. (NEPHOGENES, Meyr.).
P. Linn. Soc. N. S. W. IX 763 : type *cyclotoma*, M. (Australia).
Coesyra, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883). (Invalid ; no associated species).

Eup. Coleophora, Zeller 1839. (EUPISTA, Hb.).
Isis XXXII 206 : type *hemerobiella*, Scopoli (Europe).
Coleophora, Hb., Tentamen, p. 2 (1806) (*non-descr.*).

Gel. COLEOSTOMA, Meyrick 1922.
T. E. S. 1922, 99 : type *entryphopa*, M. (Brazil).

Gel. Coleotechnites, Chambers 1880. (RECURVARIA, Hw.).
U. S. Dept. Agr. Rep. Entom. 1879, p. 206 : type *citriella*, Chambers. (Florida).

Scythr. Cohnita, Busck. 1907. (SCYTHRIS, Hb.).
Jl. N. Y. Ent. Soc. XV 139 : type *sponsella*, Busck (Arizona)

Lyonet. COLOBOCROSSA, Meyrick 1921.
Exot. Micr. III 83 : type *cylindrodes*, M. (Assam).

Gel. COLOBODES, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 297 : type *insomnis*, M. (N. S. Wales).
|| Idiophantis, Meyr. 1904.

Tortr. Colocyttara, Turner 1925. (PERONEA, Curtis).
Tr. R. Soc. S. Austr. XLIX 54-55 : type *epidesma*, Lower. (Australia ; India).

Gel. COLONANTHES, Meyrick 1923.
Exot. Micr. III 12 : type *plectanopa*, M. (Brazil ; Peru).

Cosm. COLONOPHORA, Meyrick 1914.
Exot. Micr. I 280-281 : type *cateiata*, M. (Nyasaland).

Gel. COLOPTERYX, Hofmann 1897.
Iris X 239 : type *conchylidella*, Hofmann (Asia Minor).

Glyph. COLPOTORNA, Meyrick 1920.
Exot. Micr. II 325-326 : type *lasiopa*, M. (Queensland).

Gel. COMMATICA, Meyrick 1909.
T. E. S. 1909, 18-19 : type *eremna*, M. (S. America).
|| Apopira, Wlsm. 1911.

Phal. Commophila, Hübner 1826. (EUXANTHIS, Hb.).
Verz. p. 392 : type *aeneana*, Hb. (Europe).

Tin. COMMOTRIAS, Meyrick 1921.
Exot. Micr. III 73 : type *eucolapta*, M. (S. Rhodesia).

Ypon. COMOCRITIS, Meyrick 1894.
T. E. S. 1894, 24 : type *olympia*, M. (India ; Burma ; China).

Lyonet. COMODICA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 254-255 : type *tetracercella*, M. (E. Australia).

Crypt. Comoscotopa, Lower 1902. (PHYLOMICTIS, Meyr.).
Tr. R. Soc. S. Austr. XXXVI 239-240 : type *leucopelta*, Lower (S. Australia).

Oec. COMOTECHNA, Meyrick 1920.
Exot. Micr. II 316-317 : type *ludicra*, M. (Brit. Guiana).

Oec. COMPSISTIS, Meyrick 1888.
Tr. N. Z. Inst. XX 89-90 : type *bifaciella*, Wlk. (New Zealand).

Tin. COMPSOCRITA, Meyrick 1922.
Exot. Micr. II 589 : type *florens*, M. (Brazil).

Tin. Compsoctena, Zeller 1852. (MELASINA, Boisd.)
Micr. Caffr. pp. 86-87 : type *primella*, Zeller (S. Africa).

Gel. COMPSOLECHIA, Meyrick 1918.
Exot. Micr. II 137-138 : type [*repandella*, Wlk.=] *diortha*, M. (C. & S. America).

Gel. COMPSOSARIS, Meyrick 1914.
T. E. S. 1914 233 : type *testacea*, M. (Brit. Guiana).

Lyonet. Compsoschema, Walsingham 1897. (LYONETIA, Hb.).
P. Z. S. 1897, 142 : type *bimarginellum*, Wlsm. (W. Indies).

Crypt. COMPSOTORNA, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 41 : type *oligarchica*, M. (Queensland).

Oec. COMPSOTROPHA, Meyrick 1884.
P. Linn. Soc. N. S. W. VIII 511-512 : type *selenias*, M. (S. E. Australia).
Compsotropha, Meyr., P. Linn. Soc. N. S. W. VII 421 (1883). (Invalid : no associated species).

Ypon. CONCHIOPHORA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 349-350, f. 8 : type *spinosella*, Chrét. (Algeria).

Lyonet. Conchyliospila, Wallengren 1861. (OPOGONA, Zeller).
Resa Eugenie, Ins. pp. 387-388 : type *simoniella*, Wlgn. (Keeling Isd.).

Conchylis (See Cochylis).

Tin. CONIASTIS, Meyrick 1916.
Exot. Micr. I 600 : type *sectilis*, M. (Ceylon).

Gel. CONIOGYRA, Meyrick 1921.
Ann. Transv. Mus. VIII 66 : type *diluccscens*, M. (Rhodesia).

Tin. Conoeca, Scott 1865. (NARYCIA, Stephens).
Austral. Lep. I 26, t. 9 : type *guildingi*, Scott (N. S. Wales).

Oec. Cononia, Snellen 1901. (TONICA, Wlk.).
Tijds. Ent. XLIV 80 : type *effractella*, Snellen (Queensland).

Aeg. CONOPIA, Hübner 1820.
Verz. p. 129 : type *myopiformis*, Borkhausen (Europe).
|| Setia, Meigen 1830.
|| Pyropteron, Newman 1830.
|| Teinotarsina, Felder 1874.
|| Ichneumonoptera, Hampson 1893.
|| Vespamima, Beutenmuller 1894.
|| Palmia, Beut. 1896.
|| Sanninoidea, Beut. 1899. (1896 : *non descr.*).
|| Dipsosphecia, Spuler 1910.
|| Thamnosphecia, Spuler 1910.
|| Chamaesphecia, Spuler 1910.
|| Camaegeria, Strand 1914.
|| Leptaegeria, Le Cerf 1917.
|| Osminia, Le Cerf 1917.
|| Stenosphecia, Le Cerf 1917.
|| Aegeria, Meyr. 1928 (nec Fabr.).

Lith. Conopomorpha, Meyrick 1886. (ACROCERCOPS, Wlgn.).
Tr. N. Z. Inst. XVIII 183 : type *cyanospila*, M. (New Zealand).

Plut. CONOPOTARSA, Meyrick 1913.
Exot. Micr. I 151 : type *butyropis*, M. (Ceylon).

Aeg. CONOPSIA, Strand 1913.
Arch. Naturg. LXXVIII (A. 12), p. 71 : type *terminophora*, Strand. (Cameroons).
(Description not seen).

Aeg. Conopyga, Felder 1861. (?).
Sitz. Akad. Wiss. XLIII 27 : type *metallescens*, Felder. (Amboyna).
(Perhaps a synonym of *Sura* or *Paranthrene*).

Gel. COPHOMANTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 242 : type *elaphopis*, M. (Assam ; Borneo).

Scythr. Copida, Sodoffsky 1837. (SCYTHRIS, Hb.).
Bull. Mosc. X, No. 6, p. 95 : type *cuspidella*, Schiff. (Europe).

Crypt. COPIDORIS, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 140-141 : type *dimorpha*, M. (S. E. Australia).

Lyonet. COPOBATHRA, Meyrick 1911.
Ann. Transv. Mus. II 238 : type *menodora*, M. (Transvaal).

Schreck. COPOCENTRA, Meyrick 1909.
T. E. S. 1909, 34 : type *calliscelis*, M. (S. America).

Gel. Copocercia, Zeller 1877. (POLYHYMNO, Chambers).
H. S. E. R. XIII 374-375, t. 4, ff. 129 $^{a, b}$: type *crambinella*, Zeller (Colombia).

Oec. Copriodes, Turner 1916. (PILOPREPES, Meyr.).
P. Linn. Soc. N. S. W. XLI 339 : type *aristocratica*, M. (E. Australia).

Coprom. COPROMORPHA, Meyrick 1886.
T. E. S. 1886, 281-282 : type *gypsota*, M. (Fiji).
|| Trychnostola, Turner 1916.

Gel. COPROPTILIA, Snellen 1903.
Tijds. Ent. XLVI 32 : type *glebicolorella*, Snell. (Java; Sumatra).

Lyonet. COPTODISCA, Walsingham 1895.
E. M. M. XXXI 41 : type *splendoriferella*, Clemens. (Pennsylvania).
|| Aspidisca, Clemens 1860 (*praeocc.*).

Eucosm. Coptoloma, Lederer 1859. (ENARMONIA, Hb.).
Wien. Ent. Mon. III 370 : type *ianthinana*, Dup. (Europe ; N. Asia).

Ypon. COPTOPROCTIS, Zeller 1854.
Handl. K. Vet. Akad. 1852 p. 105 : type *languida*, Zeller (S. Africa).

Oec. Coptotelia, Zeller 1863. (HYPERCALLIA, Stephens).
Stett. Ent. Ztg. XXIV 145-147 : type *fenestrella*, Zeller. (C. & S. America).

Lyonet. Coptotriche, Walsingham 1890. (TISCHERIA, Zeller).
Insect Life II 322 : type *zelleriella*, Clemens (Atlantic States).

Tin. Coracia, Hubner 1822 (*praeocc.*). (MELASINA, Boisd.).
Verz. p. 168 : type *lugubris*, Hb. (Europe ; Asia Minor).

Schreck. CORACISTIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII, 370 : type *erythrocosma*, M. (S. E. Australia).

Oec. CORETHROPALPA, Turner 1896.
Tr. R. Soc. S. Austr. XX 27-28 : type [*melanoneura*, M.=] *falcata*, Turner. (E. Australia).

Glyph. CORIDOMORPHA, Meyrick 1914.
Tr. N. Z. Inst. XLVI 111 : type *stella*, M. (New Zealand).

Ypon. Corinea, Walker 1863. (ATTEVA, Wlk).
Cat. XXVIII 542 : type [*fabriciella*, Swed.=] *niviguttella*, Wlk. (India).

Lith. Coriscium, Zeller 1839. (CALOPTILIA, Hb.).
Isis XXXII 210 : type [*cuculipennella*, Hb.=] *ligustrinellum*, Z. (Europe).

Oec. CORMOTYPA, Meyrick 1911.
Exot. Micr. I 250 : type *subpunctella*, Wlk. (N. S. Wales).

Oec. COROCOSMA, Meyrick 1927.
Tr. N. Z. Inst. LVII 699 : type *memorabilis*, M. (New Zealand).

Schreck. CORSOCASIS, Meyrick 1912.
Exot. Micr. I 59 : type *coronias*, M. (India ; Ceylon).

Gel. Corthyntis, Meyrick 1916. (ERIDACHTHA, Meyr.).
Exot. Micr. I 574 : type [*prolocha*, M.=] *chlorotricha*, M. (S. India).

Gel. CORYNAEA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 129 : type *dilechria*, Turner (Queensland).

Tin. CORYPTILUM, Zeller 1839.
Isis XXXII 181 : type *klugii*, Zeller. (Papua to Sumatra).
|| Sippharara, Wlk. 1866.
|| Sagora, Wlk. 1869.

Eupist. CORYTHANGELA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 299-300 : type *galeata*, M. (N. S. Wales).

Lyonet. CORYTHOPHORA, Braun 1915
Canad. Entom. XLVII 188 : type *aurea*, Braun. (South-East U. S. America).

Schreck. CORYTHOXESTIS, Meyrick 1921.
Zool. Meded. VI 177-178 : type *praeustella*, Dev.=*sobrinella*, Dev (Java).

Carp. COSCINOPTYCHA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 700 : type *improbana*, Wlk. (E. Australia).

Elach. Cosmiotes, Clemens 1860. (ELACHISTA, Treits.).
Proc. Acad. Nat. Sci. Philad. 1860, 8 : type *illectella*, Clemens (N. America).

Alucit. COSMOCLOSTIS, Meyrick 1886.
T. E. S. 1886, 7 : type *aglaodesma*, M. (India to Australia).

Cosm. COSMOPTERIX, Hübner 1826.
Verz. p. 424 : type *zieglerella*, Hb. [?=*eximia*, Hw.] (Europe).
Cosmopteryx, Zeller, Isis. XXXII 210 (1839) (*emend.*).

Eucosm. COSMORRHYNCHA, Meyrick 1913.
Ann. Transv. Mus. III 276 : type [*ocellata*, Mabille—] *acrocosma*, Meyrick (Madagascar ; S. Africa).

Oec. COSTOMA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 23-24 : type *basirosella*, Busck (Panama).

Schreck. COTAENA, Walker 1864.
Cat. XXXI 21 : type *mediana*, Wlk. (Brazil).
|| Anypoptus, Durrant 1919.

Gel. COTYLOSCIA, Meyrick 1923.
Exot. Micr. III 3 : type *caustonota*, M. (S. America).

Gel. COUDIA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 326, f. 3 : type *strictella*, Chrétien (Algeria).

Gel. COYDALLA, Walker 1864.
Cat. XXX 1037-1038 : type *interguttella*, Wlk. (Sarawak).

Gel. CRAMBODOXA, Meyrick 1913.
T. E. S. 1913. 174 : type *platyaula*, M. (Colombia).

Tin. CRANAODES, Meyrick 1919.
Exot. Micr. II 238 : type *stereopa*, M. (Colombia).

Aluc. Crasimetis, Meyrick 1890. (PSELNOPHORUS, Wlgn.).
T. E. S. 1890, 489 : type *brachydactylus* Tr. (Europe).

Gel. CRASIMORPHA, Meyrick 1923.
Exot. Micr. III 33 : type *peragrata*, M. (Fr. Guiana).

Gel. CRASPEDOTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 326: type *pragmatica*, M. (S. E. Australia).

Oec. Crassa, Bruand 1859. (BORKHAUSENIA, Hb.).
Ann. S. E. Fr. (3) III 664: type *tinctella*, Hb. (Europe).

Schreck. CRATEROBATHRA, Meyrick 1927.
Exot. Micr. III 379: type *tabellifera*, M. (New Ireland).

Tin. CRATEROMBRIS, Meyrick 1921.
Ann. Transv. Mus. VIII 127: type *reluctans*, M. (Rhodesia).

Plut. Creagria, Sodoffsky 1837. (PLUTELLA, Schrank).
Bull. Mosc. X, No. 6, p. 94: type *maculipennis*, Curtis (Cosmopolitan).

Plut. Credemnon, Wallengren 1880. (YPSOLOPHUS, Fabr.).
Ent. Tidskr. I 59—60: type *sylvella*, Linn. (Europe).

Lith. CREMASTOBOMBYCIA, Braun 1908.
Tr. Am. Ent. Soc. XXXIV 349: type *solidaginis*, Frey (U. S. America).

Schreck. CREMBALASTIS, Meyrick 1915.
T. E. S. 1915· 214: type *erythrorma*, M. (Peru).

Oec. Cremnogenes, Meyrick 1884. (BORKHAUSENIA, Hb.).
Tr. N. Z. Inst. XVI 45: type *oxyina*, M. (New Zealand.)

Tin. CREPIDOCHARES, Meyrick 1922.
Exot. Micr. II 601: type *subtigrina*, M. (Brazil).

Oec. CREPIDOSCELES, Meyrick 1885.
P. Linn. Soc. N. S. W. IX 1056: type *iostephana*, M. (E. Australia).
Crepidosceles, Meyr. P. Linn. Soc. N. S. W. VII 420 (1883) (Invalid: no associated species).

Eucosm. CRIMNOLOGA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. p. 62: type *perspicua*, M. (E. Africa).

Aeg. CRINIPUS, Hampson 1896.
P. Z. S. 1896. 277, t 10 f. 21[a]: type *leucozonipus*, Hampson (Aden).

Incurv. CRINOPTERYX, Peyerimhoff 1871.
Mitt. Schweiz. Ent. Ges. III 410-411: type *familiella*, Peyr. (S. Europe).
Crynopteryx, Nolcken, Stett.ent. Ztg. XLIII 188-189 (1882).

Tin. CRITICONOMA, Meyrick 1910.
Ann. S. Afr. Mus. V 415: type *chelonaea*, M. (S. Africa).
||Etnodona, Meyr. 1915.

Lyonet. CROBYLOPHORA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 177-178: type *chrysidiella*, M. (E. Australia).
||Microthauma, Wlsm. 1891.

Eucosm. Crobylophora, Kennel 1910 (*praeocc.*). (ENARMONIA, Hb.).
Spuler's Schmett. Eur. II 294: type *inquinatana*, Hb. (Europe).

Gel. CROCANTHES, Meyrick 1886.
T. E. S. 1886. 277: type *prasinopis*, M. (E. Australia; New Guinea).
||Aprosoesta, Turner 1919.

Eucosm. CROCIDOSEMA, Zeller 1847.
. Isis XL 721: type *plebeiana*, Zeller. (Europe; Asia; Africa; Australia; Pacific Isds.; America).

Gel. CROCOGMA, Meyrick 1918.
Exot. Micr. II 100: type *isocola*, M. (Assam).
||Demopractis, Meyr. 1918.

Alucit. CROCYDOSCELUS, Walsingham 1897.
T. E. S. 1897. ·35: type *ferrugineum*, Wlsm. (W. Africa).

Tortr. Croesia, Hübner 1826. (PERONEA, Curtis).
Verz. p. 392: type *holmiana*, Linn. (Europe).

Gel. Croesopola, Meyrick 1904. (ATASTHALISTIS, Meyr.).
P. Linn. Soc. N. S. W. XXIX 410: type *euchroa*, Lower (Queensland; Bismarck Isds.).

Aluc. Crombrugghia, Tutt 1906. (OXYPTILUS, Zeller).
Brit. Lep. V 449-451: type *distans*, Zeller. (Europe).

Glyph. CRONICOMBRA, Meyrick 1920.
Exot. Micr. II 327: type *granulata*, M. (Brazil).

Tin. CRONODOXA, Meyrick 1922.
Exot. Micr. II 602: type *axiurga*, M. (Syria).

Gel. CROSSOBELA, Meyrick 1923.
. Exot. Micr. III 34: type *barysphena*, M. (Cyprus).

Oec. CROSSOPHORA, Meyrick 1886.
P. Linn. Soc. N. S. W. X 793-794: type *semiota*, M. (N. S. Wales).
Crossophora, Meyr. P. Linn. Soc. N. S. W. VII 425 (1883) (Invalid; no associated species).

Tortr. CROTHAEMA, Butler 1880.
A. M. N. H. (5) V. 388: type *sericea*, Butler. (Madagascar).

Eucosm. CRUSIMETRA, Meyrick 1912.
B. J. XXI 855: type *verecunda*, M. (Ceylon).

Lith. CRYPHIOMYSTIS, Meyrick 1922
Exot. Mic. III 563: type *pentarcha*, M. (Ceylon).

Elach CRYPHIOXENA, Meyrick 1921.
Ann. Transv. Mus. VIII 123: type *haplomorpha*, M. (Port E. Africa).

Crypt. CRYPSICHARIS, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 45: type *neocosma*, M. (Queensland).

Tin. CRYPSITHYRIS, Meyrick 1907.
B. J. XVII 752-753: type *mesodryas*, M. (Ceylon).

Tin. CRYPSITRICHA, Meyrick 1915.
Tr. N. Z. Inst. XLVII 235: type *mesotypa*, M. (New Zealand).

Oec. Crypsynarthra, Lower 1901. (ATELOSTICHA. Meyr).
Tr. R. Soc. S. Austr. XXV 85: type *chrysias*, Lower (Queensland)

Eucosm. CRYPTASPASMA, Walsingham 1900.
A. M. N. H. (7) V. 462-463: type [*helota*, M.-] *lugubris*, Wlsm nec Felder (India; S. Africa).
||Acharneodes, Meyr. 1926.

Oec. CRYPTOLECHIA, Zeller 1852.
Kongl. Vet. Akad. Handl. LXXIII (Micr. Caffr.), p. 106: type *straminella*, Z. (S. Africa).
|| Cephalisphena, Bruand 1859: Bruand 1847 (*non-descr.*).
|| Psilocorsis, Clemens 1860.
|| Bida, Wlk. 1864.
|| Hagno, Chambers 1872.
|| Melaneulia, Butler 1883.
|| Phaecosaces, Meyrick 1886.
|| Leptosaces, Meyr. 1888.
|| Theatrocopia, Wlsm. 1897.
|| Pedois, Turner 1900.
|| Acolasta, Meyr. 1902.
|| Doleromima, Meyr. 1902.
|| Inga, Busck 1908.
|| Prosarotra, Meyr. 1909.
|| Hypsipselon, Chretien 1915.

[Elach. Cryptologa, Meyr. M. S.
Fletcher, Ind. Agr. Ent. Mem. VI 217 (1921) (*non-descr.*).]

Aeg. Cryptomima, Butler 1902 (*praeocc.*).
P. Z. S. 1902. 50: type *hampsoni*, Butler (Uganda).

(*Note.* Preoccupied by *Cryptomima*, Meyr. 1881, wrongly recorded as *Cryptonima* in Zool. Record. This Aegeriad genus requires a new name.)

Oec. CRYPTOPEGES, Butler 1882.
A. M. N. H. (5) IX 100 : type *fulvia*, Butler (S. E. Australia).
|| Pycnocera, Turner 1896.

Crypt. CRYPTOPHASA, MacLeay 1805.
Lewin's Lep. N. S. Wales, p. 11 ; type *irrorata*, MacLeay (E. Australia).
|| Nycterobius, Freeman 1852 (*non-descr.*).
|| Maroga, Wlk. 1864.
|| Zitua, Wlk. 1866.
|| Pilostibes, Meyr. 1890.
|| Cryptophaga, Meyr. 1890 (*emend.*).

Eucosm. Cryptophlebia, Walsingham 1899. (ARGYROPLOCE, Hb.)
Ind. Mus. Notes IV-105 : type [*illepida*, Butl.= | *carpophaga*, Wlsm. (India ; Australia ; Hawaii).

Tortr. Cryptoptila, Meyrick 1881. (CACOECIA, Hb.).
P. Linn. Soc. N. S. W. VI-481 : type (*australana* MacLeay = | *immersana*, Wlk. (E. Australia).

Oec. CTENIOXENA, Meyrick 1923.
Exot. Micr. II 611-612 : type *crypsiptila* M. (Palestine).

Tin. CTENOCOMPA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 489 : type *baliodes*, M (Queensland).
|| Struthisca, Meyr. 1905.

Tortr. CTENOPSEUSTIS, Meyrick 1885.
Tr. N. Z. Inst. XVII 146 : type *obliquana*, Wlk. (New Zealand).

Lith. CUPHODES, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 314 : type *thysanota* M. (Queensland)
|| Phrixosceles, Meyr. 1908.

Schreck. CYANARMOSTIS, Meyrick 1927.
Exot. Micr. III 380 : type *vectigalis*, M. (Pekin).

Incurv. Cyanauges, Braun 1919 (*praeocc.*). (CHALCEOPLA. Braun).
Ohio Jl. Sci. XX 24 : type *cyanella* Busck (N. America).

Lyonet. Cyane, Chambers 1873 (*praeocc.*). (CHOROPLECA, Durrant).
Canad. Ent. V 112--113 . type *risaliella*. Chambers (Kentucky).

Crypt. CYANOCRATES, Meyrick 1925.
Exot. Micr. III 155 : type *grandis*, Druce (W. Africa).
|| Ommatothelxis, Druce 1912 (*non-descr.*).

Tin. CYATHAULA. Meyrick 1886.
T. E. S. 1886. 289 : type *maculata*, M. (Tonga ; Fiji).

Oec. CYCLOGONA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 87 : type *orthoptila*, Lower (Victoria).

Schreck. CYCLOPLASIS, Clemens 1864.
Proc. Ent. Soc. Philad. II 423-424: type *panicifoliella*, Clemens (N. America).

Lyonet. CYCLOPONYMPHA, Meyrick 1913.
Ann. Transv. Mus. III 328: type *julia*, M. (Transvaal).

Cyclotorn. CYCLOTORNA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 72: type *monocentra*, M. (Queensland).

Elach. Cycnodia, Herrich-Schäffer 1853. (ELACHISTA,Tr.).
Schmett Eur V 46-47, t 13 ff. 13, 14: type *cygnipennella*, Hb. (Europe).

Eucosm. Cydia, Hübner 1826. (ENARMONIA, Hb.).
Verz. p. 375: type *pomonella*, Linn. (Europe: N. America; S. Africa; Australia).

Tin. CYLICOBATHRA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. pp. 99-100: type *chionarga*, M. (Brit. E. Africa).

Glyph. CYLICOPHORA, Turner 1927.
Proc. R. Soc. Tasmania 1926. 156: type *collina*, Turner. (Tasmania).

.. Cyllene, Chambers 1873 (*praeocc.*).
Canad. Entom. V 124: type *minutissimella*, Chambers.

[*Note.* Belongs to Trichoptera.]

Gel. Cymatomorpha, Meyrick 1904. (HYPATIMA, Hb.).
P. Linn. Soc. N. S. W. XXIX 411-412: type *euplecta*, M. (E. Australia).

Gel. CYMATOPLEX, Meyrick 1926.
Wyts. Gen. Ins. fasc. 184, p. 223: type *aestuosa*, M. (S. Africa; Comoro Isds.).

Eucosm. Cymolomia, Lederer 1859. (ARGYROPLOCE, Hb.).
Wien. ent. Mon. III 374-375: type *hartigiana*, Ratz. (N. E. Europe).

Ypon. CYMONYMPHA, Meyrick 1927.
Ins. Samoa III 105: type *xantholeuca*, M. (Samoa).

Gel. CYMOTRICHA, Meyrick 1923.
Exot. Micr. II 626: type *miltophragma*, M. (S. America).
|| Oxysactis, Meyr. 1923.

Gel. CYNICOSTOLA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 230: type *pogonias*, M. (S. India).

Blast. Cynotes, Walsingham 1907. (HOLCOCERA, Clemens).
Proc. U. S. Nat. Mus. XXXIII 210: type *iceryaeella*, Riley (N. America).

Schreck. CYPHACMA, Meyrick 1915.
T. E. S. 1915. 213: type *chalcozela*, M. (S. America).

Cosm. Cyphophora, Herrich-Schäffer 1853. (MOMPHA, Hb.).
Schmett. Eur. V 46, t. 13 ff. 7-9: type *iduei*, Zeller (Europe; Armenia).

Lith. CYPHOSTICHA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 61: type *pyrochroma*, Turner (E. Australia).

Occ. CYPHOTHYRIS, Meyrick 1914.
Exot. Micr. I 254: type *ophryodes*, M. (Ceylon).

Ypon. Cyptasia, Walker 1866. (LACTURA, Wlk.).
Cat. XXXV 1836: type *egregiella*, Wlk. (Queensland).

Gel. CYRICTODES, Meyrick 1926.
Exot. Micr. III 283-284: type *phormophora*, M. (Costa Rica).

Gel. Cyrnia, Walsingham 1900. (HOLCOPOGON, Stdgr.).
E. M. M. XXXVI 218-219: type [*bubulcellus*, Stdgr. —] *barbata*, Wlsm. (Corsica).

Cosm. CYSTIOECETES, Braun 1915.
Canad. Entom. XLVII 194: type *nimbosus*, Braun (N. America).

D

Tin. DACRYPHANES, Meyrick 1907.
B. J. XVIII 154: type *cyanastra*, M. (Assam; Formosa).

Gel. DACTYLETHRA, Meyrick 1906.
B. J. XVII 153: type *candida*, Stainton (India).

Gel. Dactylota, Snellen 1875 (*praeocc.*). (APATETRIS, Stdgr.).
Tijds. Ent. XIX 23-27: type *kinkerella*, Snellen (Holland).

Gel. Dactylotula, Cockerell 1888. (APATETRIS, Stdgr.).
W. American Scientist V 14-15: type *kinkerella*, Snellen. (Holland).

Metachand. DAEMONARCHA, Meyrick 1918.
Ann. Transv. Mus. VI 27: type *cyphophanes*, M. (Natal).

Eupist. Damophila, Curtis 1832. (EUPISTA, Hb.).
Brit. Entom. IX expl. tab. 391: type *spissicornis*, Hw. (Europe).

Phal. Dapsilia, Hübner 1826. (PHALONIA, Hb.).
Verz. p. 394 : type *rutilana*, Hb. (Europe).

Ypon. DASCIA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 579 : type *sagittifera*, M. (E. Australia).

Tin. DASMOPHORA, Meyrick 1919.
Exot. Micr. II 268 : type *xerospila*, M. (Fr. Guiana).

Amph. DASYCAREA, Zeller 1877.
H. S. E. R. XIII 373 : type *viridisquamata*, Zeller (Colombia).

Oec. Dasycera, Stephens 1829. (ESPERIA, Hb.).
Cat. Brit. Ins. II 199 : type *sulphurella*, Fb. (Europe).
Dasycerus, Hw., Lep. Brit. pp. 524-525 (1828) (*praeocc.*).

Oec. DASYCERCA, Turner 1914
P. Linn. Soc. N. S. W. XXXIX 555 : type *apocrypha*, Turner (Queensland).

Tin. Dasyses, Durrant 1903 (HAPSIFERA, Zeller).
Ind. Mus. Notes V 92 : type *rugosella*, Stainton (India).

Aeg. DASYSPHECIA, Hampson 1919.
Novit. Zool. XXVI 79 : type *bombiformis*, Rothschild (Assam).

Oec. Dasystoma Curtis 1833. (CHEIMOPHILA, Hb.).
Ent. Mag. I 190 : type *salicella*, Hb. (Europe).

Lyonet. DAULOCOMA, Meyrick 1921.
Zool. Meded. VI 192 : type *latens*. M. (Java).

Glyph. Davendra, Moore 1887. (IMMA, Wlk.).
Lep. Ceylon III 520 : type *mackwoodii*, Moore (Ceylon).

Lyonet. DECADARCHIS, Meyrick 1886.
T. E. S. 1886. 290-291 : type [*simulans*, Butl.=] *melanastra*, Meyr. (Hawaii ; Fiji).

Oec. DECANTHA, Busck 1908.
Proc. U. S. Nat. Mus. XXXV 190, 202 : type *borkhausenii*, Z. (C. Europe ; U. S. America).

Gel. DECATOPSEUSTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 140-141 : type *xanthastis*, Lower (Queensland).

Gel. Dectobathra, Meyrick 1904. (ONEBALA, Wlk.).
P. Linn. Soc. N. S. W. XXIX 299 : type *choristis*, M. (Australia).

Gel. Decuaria, Walker 1864. (TIMYRA, Wlk.).
Cat. XXIX 797 : type *mendicella*, Wlk. (Ceylon).

? Tin. Degia, Walker 1862. (? MELASINA Boisd.).
Jl. Linn. Soc. (Zool.) VI 177-178 : type *imparata*, Wlk. (Sarawak).

Gel. DEIMNESTRA, Meyrick 1918.
Exot. Micr. II 150 : type *thyrsicola*, M. (Assam).

Oec. DELONOMA, Meyrick 1914.
Exot. Micr. I 193 : type *iothrinea*, M. (New Guinea).

Tortr. DELTOBATHRA, Meyrick 1923
Exot. Micr. III 55 : type *platamodes*, M. (Brazil ; Peru).

Gel. DELTOPLASTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 228 : type *ocreata*, M. (India).

Gel. DEMIOPHILA, Meyrick 1906.
B. J. XVII 152 : type *psaphora*, M. (Ceylon).

Tin. DEMOBROTIS, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 555-556 : type *anaglypta*, M. (Australia).

Gel. Demopractis, Meyrick 1918. (CROCOGMA, Meyr.).
Exot. Micr. II 154 : type [*isocola*, M. =] *tonaea*, M. (Assam).

Lyonet. Dendroneura, Walsingham 1892. (OPOGONA, Zeller).
P. Z. S. 1891. 509-510 : type *praestans*, Wlsm. (W. Indies).

Oec. Denisia, Hübner 1826. (BORKHAUSENIA, Hb.).
Verz., p. 420 : type *stipella*, Linn. (Europe).

Gel. DEOCLONA, Busck 1903.
Proc. U. S. Nat. Mus. XXV 837, t. 31 ff. 21, 24*: type *yuccasella*, Busck (California).
|| Proclesis, Wlsm. 1911.

Oec. DEPRESSARIA, Haworth 1811.
Lep. Brit., p. 505 : type *heracliana*, de Geer (Europe).
|| Epeleustia, Hb. 1826.
|| Agonopterix, Hb. 1826.
|| Pinaris, Hb. 1826.
|| Tichonia, Hb. 1826.
|| Drepanula, Frölich 1828 (*non-descr.*).
|| Volucra, Latreille 1829.
|| Haemylis, Treits 1832.
|| Siganorosis, Wlgn. 1881.
|| Schistodepressaria, Spuler 1910.

Tin. Derchis, Walker 1863. (ACROLOPHUS, Poey).
Cat. XXVII 7-8 : type *horridalis*, Wlk. (Brazil).

Gel. DEROXENA, Meyrick 1913.
Exot. Micr. I 153 : type *venosulella*, Möschler (S. E. Europe; Asia Minor).

Gel. DESMAUCHA, Meyrick 1918.
Exot. Micr. II 146-147 : type *chrysostoma*, M. (Brit. Guiana).

Glyph. Desmidoloma, Erschoff 1892. (GLYPHIPTERIX, Hb.).
Mém. Roman. VI 671 : type *fulgens*, Erschoff. (E. Siberia).

Aeg. Desmopoda, Felder. (MELITTIA, Hb.).
Reise Novara, Lep. Het., p. 4, (1874) (*non-descr.*) : type *bombiformis*, Felder (Amboyna).

Aluc. DEUTEROCOPUS, Zeller 1852.
Linn. Ent. VI 402 : type *tengstroemi*, Zeller (Java; Queensland)
Deuteroscopus, Hofmann, Iris XI 329 (1898) (*lapsus*).

Oec. Deuterogonia, Rebel 1901. (PAROCYSTOLA, Turner).
Cat. Lep. Pal. II 158 : type *pudorina*, Wocke (Silesia).

Gel. Deuteroptila, Meyrick 1904. (HYPATIMA, Hb.).
P. Linn. Soc. N. S. W. XXIX 418-419 : type *sphenophora*, M. (Queensland).

Tin. Deuterotinea, Rebel 1900. (TALEPORIA, Hb.).
Iris. XIII 182 : type *casanella*, Ev. (S. E. Russia).

Lyonet. DIACHALASTIS, Meyrick 1920.
Exot. Micr. II 363 : type *tetraglossa*, M. (Fiji).

Tin. DIACHORISIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. 1860. 12 : type *velatella*, Clemens (Pennsylvania).

Heliozel. Diacopia, Clemens 1872. (ANTISPILA, Hb.).
Stainton's Tin. N. Amer., pp. 19-21 : type *nyssaefoliella*, Clemens (N. America).

Aluc. DIACROTRICHA, Zeller 1852.
Linn. Ent. VI 399 : type *fasciola*, Zeller. (Java; Ceylon; India).

Tortr. DIACTENIS, Meyrick 1907.
B. J. XVII 979-980 : type *pteroneura*, M. (India; Ceylon; Queensland).

Schreck. DIADOXASTIS, Meyrick 1913.
Exot. Micr. I 78 : type *parathicta*, M. (India).

Lith. Dialectica, Walsingham 1897. (ACROCERCOPS, Wlgn.).
P. Z. S. 1897. 150 : type *scalariella*, Zeller. (S. Europe: Asia Minor).

Ypon. Dianasa, Walker 1854. (LACTURA, Wlk.).
Cat. II 488 : type *suffusa*, Wlk. (Australia).

Ypon. DIAPHRAGMISTIS, Meyrick 1914.
B. J. XXIII 126 : type *macroglena*, M. (Assam).

Tin. Diaphthirusa, Hübner 1826. (TINEA, Linn.).
Verz. p. 404 : type *granella*, Linn. (Europe).

Aeg. DIAPYRA, Turner 1917.
Proc. R. Soc. Queensl. XXIX 79 : type *igniflua*, Lucas (Queensland).
|| Glossesia, Hampson 1919.

Schreck. DIASCEPSIS, Durrant 1915.
Lep. Wollaston Expdn., pp. 150-151 : type *fascinata*, Durrant (New Guinea).

Gel. DIASTALTICA, Walsingham 1910.
Biol. Centr. Am., Het. IV 32-33, t. 11 : type *separabilis*, Wlsm. (Guatemala).

Crypt. Diastoma, Möschler 1882. (STENOMA, Zeller).
Verh. z. b. Wien XXXI 439-440 : type *nubilella*, Möschler. (Surinam).

Tin. DIATAGA, Walsingham 1914.
Biol. Centr. Am., Het. IV 374 : type *leptosceles*, Wlsm. (N., C. & Ins. America).

Plut. DIATHRYPTICA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 139 : type *proterva*, M. (N. S. Wales).

Cosm. DIATONICA, Meyrick 1921.
Exot. Micr. II 453 : type *macrogramma*, M. (Victoria).

Tin. Dicanica, Meyrick 1913. (ENDOPHTHORA, Meyr.).
Ann. Transv. Mus. III 331. : type *acrocentra*, M. (Transvaal).

Elach DICASTERIS, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 55 : type *leucastra*, M. (Tasmania).

Tortr. DICELLITIS, Meyrick 1908.
B. J. XVIII 616 : type *nigritula*, M. (India).
? || Scyphoceros, Turner 1925.

Tortr. Dichelia, Stainton 1858. (EPAGOGE, Hb.).
Manual II 197 : type *grotiana*, Fb. (Europe).
Dichelia, Guenée, Ann. S. E. Fr. (2) III 141 (1845) (*non-descr.*).

Tortr. DICHELOPA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 76 : type [*panoplana*, M.=] *dichroa*, Lower (Australia).

Gel. DICHOMERIS, Hübner 1826.
Verz. p. 105 : type *ligulella*, Hb.
Dichomeris, Hb., Zutrage I 25 (1818) (*non-descr.*).
|| Oxybelia, Hübner 1826.
|| Rhinosia, Treits. 1833.
|| Anorthosia, Clemens 1860.
|| Rhobonda, Walker 1864.
|| Carna, Wlk. 1864.
|| Sagaritis, Chambers 1872 (*praeocc.*).
|| Macrozancla, Turner 1919.
|| Euryzancla, Turner 1919.
|| Eurysara, Turner 1919.
|| Ypsolophus (nec Fb.), auct.
|| Hypsolophus, Zeller.

Eucosm. Dichrorampha, Guenée 1845. (HEMIMENE, Hb.).
Ann. S. E. Fr. (2) III 185 : type *plumbagana*, Tr. (Europe).

Lyonet. DICRANOCTETES, Braun 1918.
Entl. News XXIX 250 : type *angularis*, Braun (Maryland).

Adel. Dicte, Chambers 1873. (ADELA, Latr.).
Canad. Ent. V 73-74 : type *ridingsella*, Clemens (N. & C. America).

Tortr. Dictyopteryx, Stephens 1834. (TORTRIX, Linn.).
Ill. Brit. Ent. Haust. IV 168 169 : type *loeflingiana*, Linn. (Europe).
Dictyopterya, Steph. Cat. Brit. Ins. II 189 (1829) (*non-descr.*)

Gel. Didactylota, Walsingham 1892. (APATETRIS, Stdgr.).
P. Z. S. 1891. 522 : type *kinkerella*, Snellen (Holland).

Tin. Dietzia, Busck 1906. (ELATOBIA, H.-S.).
Proc. U. S. Nat. Mus. XXX 735 : type *carbonella*, Dietz. (Pennsylvania).

Gel. DINOCHARES, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 205 : type *conotoma*, M. (Ceylon).

Tin. DINOCHORA, Meyrick 1924.
Exot. Micr. III 69 : type *clytozona*, M. (N. India).

Crypt. DINOTROPA, Meyrick 1916.
Exot. Micr. I 506 : type *ochrocrossa*, M. (Fr. Guiana).

Oec. DIOCOSMA, Meyrick 1909.
Ann. S. Afr. Mus. V 352-353 : type *callichroa*, M. (C. Colony).

Tin. Diplodoma, Zeller 1852. (NARYCIA, Stephens).
Linn. Ent. VII 332, 359 : type *marginepunctella*, Stephens (Europe).

Eucosm. DIPLONEARCHA, Meyrick 1914.
Exot. Micr. I 274 : type *insinuans*, M. (Ceylon).

Diplos. DIPLOSARA, Meyrick 1883.
E. M. M. XX 35 : type *lignivora*, Butler (Hawaii)

Lyonet. DIPLOTHECTIS, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 599 : type *chionochalca*, M. (N. S. Wales).

Aeg. Dipsosphecia, Spuler 1910. (CONOPIA, Hb.).
Schmett. Eur. II 316 : type *ichneumoniformis*, Schiff. (Europe).

Tortr. Dipterina, Meyrick 1881. (CNEPHASIA, Curtis).
P. Linn. Soc. N. S. W. VI 523 : type *imbriferana*, M. (New Zealand).

Oec. Discolata, Spuler 1910. (BATIA, Stephens).
Schmett. Eur. II 318 : type *lunaris*, Hw. (Europe).

Oec. Disqueia, Spuler 1910. (SCHIFFERMUELLERIA, Hb.).
Schmett. Eur. II 318 : type *schaefferella*, Linn. (Europe).

Oec. DISSELIA, Meyrick 1886.
P. Linn. Soc. N. S. W. X 798 : type *aleurota*, M. (Australia).
Disselia, Meyr. P. Linn. Soc. N. S. W. VII 425 (1883) [Invalid, no associated species].

Tin. DISSOCTENA, Staudinger 1859.
Stett. Ent. Ztg. XX 231 : type *granigerella*. Stdgr. (Spain).

Gel. DISSOPTILA, Meyrick 1914.
T. E. S. 1914. 231 : type *mutabilis*, M. (Brit. Guiana).

Ypon. DISTAGMOS, Herrich-Schaffer 1853.
Schmett. Eur. V 27, t. 11 f. 8 . type *ledereri*, H. S. (Spain).
|| Artenacia, Chrétien 1905.

Ypon. Disthymnia, Hübner 1826. (ETHMIA, Hb.).
Verz., p. 413 : type *funerella*, Fabr. (C. & S. Europe).

Glyph. DITRIGONOPHORA, Walsingham 1897.
P. Z. S. 1897. 117-118 : type *marmoreipennis*, Wlsm. (W. Indies).

Tortr. DITULA, Stephens 1854.
Ill. Brit. Ent. Haust. IV 82-83 : type *angustiorana*, Hw. (Europe).
Ditula, Steph., Cat. Brit. Ins. II 172 (1829) (*non-descr.*).
|| Batodes, Lederer 1859.
|| Asthenoptycha, Meyr. 1881.
|| Anatropia, Meyr. 1881.

Oec. DIURNEA, Haworth 1811.
Lep. Brit., p. 501 : type [*fagella*, Fb. =] *fagi*, Hw. (Europe).
|| Chimabache, Hb. 1826.
|| Lemmatophila, Tr. 1832.

Oec. Doleromima, Meyrick 1902. (CRYPTOLECHIA, Zeller).
Tr. R. Soc. S. Austr. XXVI 158: type [*hypoxantha*, Low. =] *eumorpha*, M. (Australia).

Lyonet. DOLEROTHERA, Meyrick 1918.
Exot. Micr. II 186: type *amphiplecta*, M. (Ceylon).

Gel. DOLEROTRICHA, Meyrick 1926.
Wyts. Gen. Ins., fasc.184, p. 151: type *flabellifera*, Rebel (Morocco).

Plut. DOLICHERNIS, Meyrick 1891.
Tr. N. Z. Inst. XXIII 99: type *chloroleuca*, M. (New Zealand).

Gel. DOLICHOTORNA, Meyrick 1910.
B. J. XX 138: type *tholias*, M. (Ceylon).

Crypt. Dolichiria, Busck 1912. (DURRANTIA, Busck).
Smiths. Inst. Misc. Coll. 59, Pubn. 2079, p. 5: type *arcanella*, Busck (Panama).

Eucosm. DOLIOCHASTIS, Meyrick 1920.
Ann. S. Afr. Mus. XVII 277: type *homograpta*, M. (Transvaal; Rhodesia).

Oec. DOLIOTECHNA, Meyrick 1914.
Exot. Micr. I 187: type *orphnopis*, M. (Brit. Guiana).

Schreck. DOLOPHROSYNE, Durrant 1919.
Novit. Zool. XXVI 120-121: type *balteata*, Durrant (Queensland).

Tortr. DOLOPLOCA, Hübner 1826.
Verz. p. 387: type *punctulana*, Schiff. (C. Europe).

Tin. DORATA, Busck 1904.
Proc. E. S. Wash. VI 123-124, f. 2: type [*lineata*, Wlsm. =] *virgatella*, Busck (Arizona).

Cosm. DORODOCA, Meyrick 1915.
Exot. Micr. I 324: type *chrysomochla*, M. (India).

Gel. DORYCNOPA, Lower 1901.
Tr. R Soc. S. Austr. XXV 77: type [*heliochares*, Low.=] *acroxantha*, Lower (S. Australia).
‖ Bactrolopha, Lower 1901.

Gel. Doryphora Heinemann 1870 (*praeocc.*). (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschm. II i. 298-299: type *pulveratella*, H. S. (Europe).

Gel. Doryphorella, Cockerell 1888. (ARISTOTELIA, Hb.).
Entom. XXI 163: type *pulveratella*, H. S. (Europe).

Dougl. DOUGLASIA, Stainton 1854.
Ins. Brit. Tin., pp. 179-180 t. 6 ff. 5a-c: type *ocnerostomella*, Stainton (Europe; Asia Minor).

Oec. DOXA, Walsingham 1912.
Biol. Centr. Am., Het. IV 119, f. 27 : type *sodalis,* Wlsm. (C. & S. America).

Gel. DOXOGENES, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 205-206 : type *brochias*, M. (Ceylon).

Oec. DOXOMERES, Meyrick 1917.
Ann. S. Afr. Mus. XVII 6 : type *diaxantha*, M. (Transvaal).

Plut. DOXOPHYRTIS, Meyrick 1914.
Tr. N. Z. Inst. XLVI 112 : type *hydrocosma*, M. (New Zealand).

Aluc. Doxosteres, Meyrick 1886. (STENOPTILIA, Hb.).
T. E. S. 1886. 10-11 : type [*zophodactyla*, Dup. =] *canalis*, Wlk. (Europe ; Asia ; Australia, etc.).

Tortr. DRACHMOBOLA, Meyrick 1907.
B. J. XVII 970 : type *periastra*, M. (India).

Gel. Dragmatucha, Meyrick 1908. (IDIOPTERYX, Wlsm.).
P. Z. S. 1908. 726 : type *proaula*, M. (S. Africa).

Tin. DRASTEA, Walsingham 1914.
Biol. Centr. Am., Het. IV 368 : type *mexica*, Wlsm. (Mexico).

Gel. DREPANOTERMA, Walsingham 1897.
P. Z. S. 1897. 81-85 : type *lacticaudellum*, Wlsm. (W. Indies).

Oec. Drepanula, Frölich 1829 (*non-descr.*). (DEPRESSARIA, Hw.).
Enum. Tortr. Würtemb., p. 11 : type *applana*, Fb. (Europe).

Tin. DRIMYLASTIS, Meyrick 1907.
B. J. XVII 987-988 : type *telamonia*, M. (Ceylon ; S. India)

Cosm. DROMIAULIS, Meyrick 1922.
Exot. Micr. II 571-575 : type *excitata*, M. (Peru).

Tin. DROSICA, Walker 1863.
Cat. XXVIII 519 : type *abjectella*, Wlk. (S. Africa).

Lyonet. DRYADAULA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 559 : type *glycinopa*, M. (S. E. Australia).

Blast. Dryope, Chambers 1874 (*praeocc.*). (PIGRITIA, Clemens).
Canad. Entom. VI 49-50 : type [*ochrocomella*, Clem. =] *murtfeldtella*, Chambers (Atlantic States).

Blast. Dryoperia, Coolidge 1909. (PIGRITIA, Clemens).
Entl. News XX 112 : type *ochrocomella*, Clemens (Atlantic States).

Eucosm. Dudua, Walker 1864. (ARGYROPLOCE, Hb.).
Cat. XXX 1000 : type *hesperialis*, Wlk. (Sarawak).

Crypt. DURRANTIA, Busck 1908.
Proc. U. S. Nat. Mus. XXXV 197-198: type *piperatella*, Zeller (N. America).
|| Dolidiria, Busck 1912.

Gel. Duvita, Busck 1916. (BATTARISTIS, Meyr.).
Proc. E. S. Wash. XVIII 147: type *vittella*, Busck (Atlantic States).

Ypon. Dyscedestis, Spuler 1910. (CEDESTIS, Zeller).
Schmett. Eur. II 449, f. 199: type *farinatella*, Dup. (Europe).

Elach. Dyselachista, Spuler 1910. (SCIRTOPODA, Wocke).
Schmett. Eur. II 424, f. 175: type *saltatricella*, F. R. (Europe).

Eriocran. Dyseriocrania, Spuler 1910 (*non-descr.*). (MNEMONICA, Meyr.).
Schmett. Eur. II 483: type *subpurpurella*, Hw. (Europe).

Oec. DYSGNORIMA, Zeller 1877.
H. S. E. R. XIII 255-256: type *subannulata*, Zeller. (Colombia).

Tin. DYSMASIA, Herrich-Schäffer 1853.
Schmett. Eur. V 23, t. 10 f. 27: type *petrinella*, H. S. (Europe).
|| Stathmopolitis, Wlsm. 1908.

Incurv. DYSOPTUS, Walsingham 1914.
Biol. Centr. Am., Het. IV 374: type *probata*, Wlsm. (Guatemala).

Diplos. DYSPHORIA, Walsingham 1907.
Faun. Hawaii. I 547-548: type *semicolon*, Wlsm. (Hawaii).

Tin. DYSTOPASTA, Busck 1907.
Jl. N. Y. Ent. Soc. XV 140: type *yumaella*, Kearfott (N. America).
[*Dyotopasta* error typogr.]
|| Pseudoxylesthia, Wlsm. 1907.

E

Eucosm. Ebisma, Walker 1866. (ENARMONIA, Hb.).
Cat. XXXV 1803 18 1: type *seclusana*, Wlk. (New Guinea).

Tortr. EBODA, Walker 1866.
Cat. XXXV 1804: type *smaragdinana*, Wlk. (India; Ceylon; Papua).

Schreck. ECBALLOGONIA, Walsingham 1912.
Biol. Centr. Am., Het. IV 137: type *bimetallica*, Wlsm. (Mexico).

Tortr. ECCLITICA, Meyrick 1923.
Tr. N. Z. Inst. LIV 164: type *hemiclista*, M. (New Zealand).

Tin. Eccompsoctena, Walsingham 1897. (MELASINA, Boisd.).
T. E. S. 1897. 61: type *secundella*, Wlsm. (W. Africa).

Eucosm. Eccopsis, Zeller 1852. (ARGYROPLOCE, Hb.).
Micr. Caffr., pp. 79-80: type *wahlbergiana*, Zeller (S. Africa).

Eucosm. ECCOPTOCERA, Walsingham 1907.
Faun. Hawaii. I 673: type *faetivorans*, Butler (Hawaii).

Eucosm. ECDYTOLOPHA, Zeller 1875.
Verh. z-b. Wien XXV 266: type *insiticiana*, Zeller (U. S. America).
|| Gymnandrosoma, Dyar 1904.

Aeg. ECHIDGNATHIA, Hampson 1919.
Novit. Zool. XXVI 50, 97: type *vitrifasciata*, Hmp. (Mashonaland).

Schreck. ECHINOPHRICTIS, Meyrick 1922.
Exot. Micr. II 588: type *triphracta*, M. (Brazil).

Schreck. ECHINOSCELIS, Meyrick 1886.
T. E. S. 1886. 292: type *hemithia*, M. (Tonga).

Crypt. ECHIOMIMA, Meyrick 1915.
Exot. Micr. I 373: type *mythica*, M. (Australia).

Tin. ECHYROTA, Meyrick 1916.
Exot. Micr. I 601: type *chalicitis*, M. (S. India).

Oec. ECLACTISTIS, Meyrick 1913.
Exot. Micr. I 134: type *byrseuta*, M. (New Guinea).

Oec. ECLECTA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 414: type *aurorella*, M. (N. S. Wales).

Tortr. Eclectis, Hübner 1826. (PERONEA, Curtis).
Verz. p. 385: type *hastiana*, Linn. (Europe).

Oec. Ecliptoloma, Zeller 1877. (TARUDA, Wlk.).
H. S. E. R. XIII 326-327, t. 4 ff. 102 a, b: type *hemiommata*. Zeller (S. America ?).

? Aeg. Ecrectica, Walker 1864. (.....?.....)
Cat. XXXI 20: type *fasciata*, Wlk. (Brazil).

Oec. ECTAGA, Walsingham 1912.
Biol. Centr. Am., Het. IV 140: type *promeces*, Wlsm. (C. America).

Stigm. ECTOEDEMIA, Busck 1907.
Proc. E. S. Wash. VIII 97-98: type *populella*, Busck (Atlantic States).

Tin. Eddara, Walker 1863 (*praeocc.*). (ACROLOPHUS, Poey).
Cat. XXVIII 517-518: type *xylinella*, Wlk. (Jamaica).

Ypon. Ederesa, Curtis 1833. (ARGYRESTHIA, Hb.).
Entom. Mag. I 191: type *pruniella*, Linn. (Europe).

Tin. Edosa, Walker 1866. (TINEA, Linn.).
Cat. XXXV 1818—1819: type *hemichrysella*, Wlk. (Java).

Oec. EIDO, Chambers 1873.
Canad. Entom. V 72 : type *albapalpella*, Chambers (U. S. America).
|| Venilia, Chambers 1872. (*praeocc.*).
? || Atheropla, Meyr. 1884.
(*Note* · *albapalpella*, Chambers, has never been identified satisfactorily.)

Gel. Eidothea, Chambers 1873. (RECURVARIA, Hw.).
Canad. Ent. V 186 187 : type [*dorsimaculella*, Zeller =] *vagativella*, Chamb. (N. America).

Plut. EIDOPHASIA, Stephens 1842.
Ill. Brit. Ent., Suppl. p. 418 : type *messingiella*, F. R. (Europe : W. Asia).
|| Spania, Guenée 1845 (*non-descr.*).

Elach. ELACHISTA, Treitschke 1833.
Schmett. Eur. IX ii 177 : type *bifasciella*, Tr. (Europe).
|| Aphelosetia, Stephens 1834.
|| Cycnodia, H. S. 1853.
|| Poeciloptilia, H. S. 1853. (nec. Hb.).
|| Cosmiotes, Clemens 1860.
|| Phigalia, Chamb. 1875 (*praeocc.*).
|| Hecista, Wallengren 1881.
|| Aphigalia, Dyar 1903.

Oec. Elachypteryx, Turner 1919. (PHOLEUTIS, Meyr.).
Proc. R. Soc. Queensl. XXXI 128 : type [*neolecta*, M. =] *suffusca*, Turner (E. Australia).

Tortr. ELAEODINA, Meyrick 1926.
Sarawak Mus. Jl. III 149 : type *refrangens*, M. (Sarawak).

Oec. ELAEONOMA, Meyrick 1914.
Exot. Micr. I 238 : type *piodes*, M. (Queensland).

Oec. ELAPHRERGA, Meyrick 1922.
Exot. Micr. II 547 : type *rhythmica*, M. (S. India).

Gel. ELASIPRORA, Meyrick 1914.
T. E. S. 1914. 230-231 : type *rostrifera*, M. (Brit. Guiana).

Adel. Elasmion, Hubner 1806 (*non-descr.*). (NEMOPHORA, Hofm.).
Tentamen, p. 2 : type "*geerella*."

Tin. ELATOBIA, Herrich-Schäffer 1853.
Schmett. Eur. V 22, t. 10 ff. 10-12 : type *fuliginosella*, Zeller (Europe).
|| Abacobia, Dietz. 1905.
|| Dietzia, Busck 1906.

Chlid. ELECTRACMA, Meyrick 1906.
B. J. XVII 413 : type *hemichroa*, M. (Ceylon).

Glyph. ELECTROGRAPHA, Meyrick 1912.
Exot. Micr. I 63 : type *theolychna*, M. (Burma).

Tin. ELEGISTIS, Meyrick 1911.
B. J. XXI 125 : type *cunicularis*, M. (Ceylon).

Ypon. ELLABELLA. Busck 1925.
Proc. E. S. Wash. XXVII 46, t. 3 : type *editha*, Busck (Canada).

Tin. ELLOCHOTIS Meyrick 1920.
Ann. S. Afr. Mus. XVII 311 : type *infausta*, M. (C. Colony).

Tin. EMBLEMATODES, Meyrick 1911
Exot. Micr. I 288 : type *cyanochra*, M. (Nyasaland).

Schreck. Embola, Walsingham 1909. (LAMPROLOPHUS, Busck).
Biol. Centr. Am., Het. IV 3, f. 2 : type *xanthocephala*, Wlsm. (Mexico).

Glyph. EMBRYONOPSIS. Eaton 1875.
E. M. M. XII 61 : type *halticella*, Eaton (Kerguelen)

Aluc. Emmelina, Forbes 1921. (OIDAEMATOPHORUS, Wlgn.).
Lep. N. York. p. 651 : type *monodactylus*, Linn. (Europe ; N. Asia ; N. America).
Emmelina, Tutt, Ent. Rec. XVII 37 (1905) (*non-descr.*).

Tin. EMMETOECA, Meyrick 1921.
Ann. Transv. Mus. VIII 127 : type *melicosma*, M. (Natal).

Gel. EMPALACTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 181, p. 170 : type *sporogramma*, M. (N. Australia).

Gel. EMPEDAULA, Meyrick 1918.
Exot. Micr. II 148 : type *insipiens*, M. (India).

Ypon. Enaemia, Zeller 1872. (LACTURA, Wlk.).
Verh. z.-b. Ges. Wien XXII 562 : type *psammitis*, Zeller (Texas).

Eucosm. ENARMONIA, Hübner 1826.
Verz. p. 375 : type *woeberiana*, Schiff. (Europe to Siberia).
|| Cydia, Hb. 1826.
|| Laspeyresia, Hb. 1826.
|| Carpocapsa, Tr. 1830.
|| Grapholitha, Tr. 1830.
|| Ephippiphora, Dup. 1834.
|| Pseudotomia, Steph. 1834.
|| Euspila, Steph. 1834.

|| Aspila, Steph. 1834.
|| Selania, Steph. 1834.
|| Opadia, Gn. 1845 (*non-descr.*).
|| Orchemia, Gn. 1845 (*non-descr.*).
|| Semasia, Stainton 1859 (nec H. S. 1851).
|| Stigmonota, Stainton 1859 (Gn. 1845 - *non-descr.*).
|| Endopisa, Stainton 1859 (Gn. 1845 *non-descr.*).
|| Coptoloma, Lederer 1859.
|| Ebisma, Wlk. 1866.
|| Melissopus, Riley 1881.
|| Leptarthra, Lower 1902.
|| Trycheris, Barrett 1907 (Gn. 1845—(*non-descr*).
|| Crobylophora, Kennel 1910 (nec Meyr. 1880).
|| Cerata, Pierce 1922 (Steph. 1852 *non-descr.*)
|| Ofatulena, Heinrich 1926.
|| Hedulia, Heinrich 1926.

Schreck. ENCAMINA, Meyrick 1915.
T. E. S. 1915. 214 : type *phlegyropa*, M. (Brit.-Guiana).

Tin. ENCELIDOTIS, Meyrick 1920.
Ann. S. Afr. Mus. XVII 307-308 : type *ochrophragma*, M. (C. Colony).

Gel ENCENTROTIS, Meyrick 1921.
Ann. Transv. Mus. VIII 65 : type *catagrapha*, M. (Natal).

Oec. ENCHOCRATES, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 442-443 : type *glaucopis*, M. (S. E. Australia).

Amph ENCHOPTILA, Turner 1914.
P. Linn. Soc. N. S. W. XXXIX 551 : type *idiopis*, Turner (N. S. Wales).

Oec. ENCHRONISTA, Meyrick 1914.
Exot. Micr. I 249 : type *prorimella*, Wlk. (N. S. Wales).

Gel. Enchrysa, Zeller 1873. (ARISTOTELIA, Hb.).
Verh. z-b. Ges. Wien XXIII 282-283, t. 4 f. 29 : type *dissectella*, Zeller (Ohio).

Gel. ENCOLAPTA, Meyrick 1913.
B. J. XXII 167 : type *metorcha*, M. (Ceylon).

Gel. ENCOLPOTIS, Meyrick 1909.
Ann. S. Afr. Mus. V 352 : type *xanthoria*, M. (S. Africa).

Gel. ENCRASIMA, Meyrick 1916.
Exot. Micr. I 594 : type *reversa*, M. (Ceylon).

Glyph. ENCRATORA, Meyrick 1923.
Exot. Micr. II 618 : type *plumbigera*, M. (Assam).

Cosm. ENDOGRAPTIS, Meyrick 1927.
Ins. Samoa III 92 : type *pyrrhoptila*, M. (Samoa).

Tin. ENDOPHTHORA, Meyrick 1888.
Tr. N. Z. Inst. XX 93 : type *omogramma*, M. (New Zealand)
|| Dicanica. Meyr. 1913.

Eucosm. Endopisa, Stainton 1859. (ENARMONIA, Hb.).
Manual II 250 : type *nigricana*, Fb. (Europe).
Endopisa, Guenee, Ann. S. E. Fr. (2) III 182 (1845) (*non-descr.*).

Coprom. ENDOTHAMNA, Meyrick 1922.
Entom. Mitteil. XI 46 : type *marmarocyma*, M. (Chile)

Eucosm. ENDOTHENIA, Heinrich 1926.
U. S. Nat. Mus. Bull. 132, p. 100, f. 18 : type *gentiana*, Hb. (Europe).
Endothenia, Steph., List. Brit. Anim. B. M. X 28 (1852) (*non-descr.*).
|| Taniva, Heinrich 1926.
|| Tia, Heinrich 1926.
|| Hulda, Heinrich 1926.

Oec. ENDROSIS, Hübner 1826.
Verz. p. 401 : type *lacteella*, Schiff. (Europe, Asia, etc.).

Crypt. Energia, Walsingham 1912. (ANTAEOTRICHA, Zeller).
Biol. Centr. Am., Het. IV 113, f. 21 : type *subreisa*, Wlsm. (C. America).

Oec. ENICOSTOMA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 226 : type *lobella*, Schiff. (Europe).
Enicostoma, Steph., Cat. Brit. Ins. II 199 (1829) (*non-descr.*).
Henicostoma, Spuler, Schmett. Eur. II 342 (1910) (*emend*).

Oec. Enicostoma, Duponchel 1838 (nec. Steph. 1834). (OECOPHORA, Latr.).
Ann. S. E. Fr. VII 144-145 : type *geoffrella*, Linn (Europe).

Tortr. ENODITIS, Meyrick 1912.
Exot. Micr. I 2 : type *praecana*, Kennel (E. Siberia).

Scythr. Enolmis, Duponchel 1845. (SCYTHRIS, Hb.).
Cat. Meth. Lep. Eur., pp. 340-341 : type *acanthella* Godart (Europe).

Carp. Enopa, Walker 1866. (CARPOSINA, H. S.).
Cat. XXXV 1738 : type *mediella*, Wlk. (Australia).

Eupist. ENSCEPASTRA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 300 : type *plagiopa*, M. (C. Colony).

Crypt. ENTEREMNA, Meyrick 1917.
Exot. Micr. II 55 : type *dolerastis*, M. (W. Australia).

Lyonet. ENTEUCHA, Meyrick 1915.
T. E. S. 1915. 241 : type *cyanochlora*, M. (Brit. Guiana).

Gel. ENTHETICA, Meyrick 1916.
Exot. Micr. I 574 : type *picryntis*, M. (S. India).

Glyph. Entomoloma, Ragonot 1875. (ANTHOPHILA, Hw.).
Bull. S. E. Fr. (5) V, p. xliii : type *nemorana*, Hb. (Europe).

Ypon. ENTRICHIRIA, Meyrick 1921.
Zool. Meded. VI 187 : type *amphiphracta*, M. (Java).

Tortr. Enyphantes, Pierce 1922. (EXAPATE, Hb.).
Genit. Brit. Tortr., pp. 14-15 : type *congelatella*, Clerck. (Europe).
Enyphantes, Hb., Tentamen, p. 2 (1806) (*non-descr.*).

Oec. Eochroa, Meyrick 1883 (*praeocc.*) (EOCHROIS, Meyr.).
P. Linn. Soc. N. S. W. VII 448 : type *pulverulenta*, M. (S. E. Australia).

Oec. EOCHROIS, Meyrick 1886.
P. Linn. Soc. N. S. W. X 828 : type *pulverulenta*, M. (S. E. Australia).
|| Eochroa, Meyr. 1883 (nec. Felder).

Oec. EOMICHLA, Meyrick 1916.
Exot. Micr. I 545-546 : type *notandella*, Busck (S. America).

Oec. EOMYSTIS, Meyrick 1887.
P. Linn. Soc. N. S. W. XII 932 : type *rhodopis*, M. (W. Australia).

Oec. EONYMPHA, Meyrick 1906.
B. J. XVII 406 : type *erythrozona*, M. (Ceylon).

Tin. EOSOLENOBIA, Filipjev 1924.
An. Mart. Nat. Mus. Minussinsk II, No. 3, p. 43 : type *grisea*, Filipjev (Minussinsk).
(Description not available.)

Tin. EPACTRIS, Meyrick 1905.
B. J. XVI 617 : type *melanchaeta*, M. (Ceylon).

Tortr. EPAGOGE, Hübner 1826.
Verz. p. 389 : type [*grotiana*, Fb.=] *flavana*, Hb. (Europe to N. E. Asia).
|| Capua, Stephens 1834.
|| Teratodes, Guenee 1845 (*non-descr.*).
|| Dichelia, Stainton 1858 (Gn. 1845—*non-descr.*).
|| Sperchia, Walker 1869.
|| Epitymbia, Meyr. 1881.

Tin. EPALEURA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 14 : type *salaria*, M. (C. Colony).

Tortr. EPALXIPHORA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 647-648 : type *axenana*, M. (N. Zealand).

Gel. Epanastasis, Walsingham 1908. (CHERSOGENES, Wlsm.).
P. Z. S. 1907. 948 : type *sophroniellus*, Rebel (Canary Isds.).

Oec. Epeleustia, Hübner 1826. (DEPRESSARIA, Hw.).
Verz. p. 410 : type *hypericella*, Hb. (Europe).

Eperm. EPERMENIA, Hübner 1826.
Verz. p. 418 : type *pontificella*, Hb. (Europe).
|| Calotripis, Hb. 1826.
|| Trichotripis, Hb. 1826.
|| Chauliodus, Tr. 1833.
|| Lophonotus, Stephens 1834.

Gel. EPHARMONIA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 226 : type *ardua*, M. (Assam).

Tin. EPHEDROXENA, Meyrick 1919.
Exot. Micr. II 277 : type *incisoria*, M. (Brit. Guiana).

Gel. EPHELICTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 387-388 : type *neochalca*, M. (W. Australia).

Eucosm. Ephippiphora, Duponchel 1834. (ENARMONIA, Hb.).
Ann. S. E. Fr. III 446 : type |*jungiella*, Cl. = |*dorsana*, Dup. (Europe.)

Eucosm. Ephippiphora, Stainton 1859 (nec. Dup. 1834). (PAMMENE, Hb.).
Manual II 242 : type *regiana*, Zeller. (Europe).
Ephippiphora, Guenee, Ann. S. E. Fr. (2) III 176 (1845) (*non-desc.*).

Gel. EPHYSTERIS, Meyrick 1909.
P. Z. S. 1908. 724-725 : type *chersaea*, M. (S. Africa).

Eucosm. Epibactra, Ragonot 1894. (EUCOSMA, Hb.).
Ann. S. E. Fr. LXIII 208 : type *sareptana*, H. S. (S. E. Europe).

Eucosm. Epibactra, Meyrick 1909 (nec. Rag. 1894). (PARABACTRA, Meyr.).
B. J. XIX 582 : type *arenosa*, M. (Ceylon).

Eucosm. Epiblema, Hübner 1826. (EUCOSMA, Hb.).
Verz. p. 375 : type *foenella*, Linn. (Europe).

Gel. EPIBRONTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 324 : type *hemichlaena*, Lower (Australia).

Oec. Epicallima, Dyar 1903. (SCHIFFERMUELLERIA, Hb.).
U. S. Nat. Mus. Bull. 52, p. 525 : type *argenticinctella*, Clem. (Atlantic States).

Lith. EPICEPHALA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 168-169 : type *colymbetella*, M. (E. Australia).

Tin. Epichaeta, Dietz 1905. (APRETA, Dietz).
Tr. Amer. E. S. XXXI 21, t. 4 f. 7 : type [*paradoxella*, Dietz=] *nepotella*, Dietz (California).

Eucosm. Epicharis, Hübner 1826 (*praeocc.*) (ANCYLIS, Hb.).
Verz. p. 376 : type *derasana*, Hb. (Europe).

Gel. Epicharma, Walsingham 1897. (AUTOSTICHA, Meyr.).
T. E. S. 1897. 38-39 : type *nothriforme*, Wlsm. (W. Africa).

Gel. EPICHARTA, Meyrick 1926.
Exot. Micr. III 285 : type *gnomonodes*, M. (S. Rhodesia).

Tortr. EPICHORISTA, Meyrick 1909.
Ann. Transv. Mus. II 5 : type *hemionana*, M. (New Zealand).

Crypt. EPICHOSTIS, Meyrick 1906.
B. J. XVII 404: type *elephantias*, M. (Ceylon).

Tin. Epichysia, Hübner 1826. (EUPLOCAMUS, Latreille).
Verz. p. 404 : type [*anthracinalis*, Scop. =] *anthracinella*, Hb. (Europe.)

Tin. EPICNAPTIS, Meyrick 1916.
Exot. Micr. I 606 : type *rigens*, M. (Nyasaland).

Lith. EPICNISTIS, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 64-65 : type *euryscia*, M. (Tasmania).

Gel. Epicoenia, Meyrick 1906. (AUTOSTICHA, Meyr.)
B. J. XVII 140 : type *chernetis*, M. (Ceylon.)

Gel. EPICORTHYLIS, Zeller 1873.
Verh. z.-b. Ges. Wien XXIII 248, t. 3 ff. 13 ^{a}, ^{b} : type *inversella*, Zeller (Texas).

Glyph. EPICROESA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 94-95 : type *ambrosia*, M. (Queensland).

Oec EPICURICA, Meyrick 1914.
Exot. Micr. I 252 : type *laetiferana*, Wlk. (E. Australia).
|| Eurypelta, Turner 1894 (*praeocc.*).
|| Pycnozancla, Turner 1917.

Ypon. Epidictica, Turner 1903. (LACTURA, Wlk.).
P. Linn. Soc. N. S. W. XXVIII 81 : type *calliphylla*, Turner (Queensland).

Crypt. Epidiopteryx, Rebel 1916. (STENOMA, Zeller).
Denkschr. Kais. Akad. Wiss. Wien XCIII 443 : type *pubescentella*, Stt.

Gel. EPIDOLA, Staudinger 1859.
Stett. Ent. Ztg. XX 213-214 : type *stigma*, Stdgr. (Spain).

Oec. EPIGRAPHIA, Duponchel 1838.
Ann. S. E. Fr. VII 132 : type *avellanella*, Hb. (Europe).
|| Semioscopis, auct. (nec. Hb.)

Blast. Epigritia, Dietz 1900. (PIGRITIA, Clemens).
Tr. Amer. E. S. XXVII 102, 110-111, t. 7 f. 8 : type *pallidituncella*, Dietz. (Pennsylvania).

Tin. Epilegis, Dietz 1905. (SETOMORPHA, Zeller).
Tr. Amer. E. S. XXXI 16, t. 1 f. 2 : type [*insectella*, Fb. =] *cariosella*. Dietz.

Crypt. EPIMACTIS, Meyrick 1907.
B. J. XVII 711 : type *monodora*, M. (N. India).

Epermen. EPIMARPTIS, Meyrick 1911.
B. J. XXII 776 : type *philocoma*, M. [India].

Micropt. EPIMARTYRIA, Walsingham 1898.
Ent. Rec. X 161 : type *pardella*, Wlsm. (West. N. America).

Oec. EPIMECYNTIS, Meyrick 1921.
Exot. Micr. III 100 : type *eschatopa*, M. (Sumatra).

Gel. EPIMESOPHLEPS, Rebel 1907.
Denkschr. Kais. Akad. Wiss. Wien LXXI 125 : type *symmocella*, Rebel (Sokotra).

Gel. EPIMIMASTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 325 : type *porphyroloma*, Lower [Australia].

Eucosm. Epinotia, Hübner 1826. (EUCOSMA, Hb.).
Verz., p. 377: type *similana*, Hb. [Europe].

Gel. EPIPARASIA, Rebel 1914.
Iris XXVIII 276 : type [*incertella*, H. S.=] *longivittella*, Rebel [S. Russia ; E. Turkestan].

Oec. EPIPHRACTIS, Meyrick 1909.
P. Z. S. 1908. 732 : type *phoenicis*, M. [Angola].

Tortr. EPIPHYAS, Turner 1927.
Proc. R. Soc. Tasmania 1926. 125 : type *eucyrta*, Turner [Tasmania].

Gel. Epiphthora, Meyrick 1888. (APATETRIS, Stdgr.).
Tr. N. Z. Inst. XX 77 : type *melanombra*, M. [New Zealand].

Epipyrop. EPIPOMPONIA, Dyar 1906.
Jl. N. Y. Ent. Soc. XIV 111-112 : type *nawai*, Dyar [Japan].

Oec. EPIPYRGA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 791 : type *agaclita*, M. [Queensland].
Epipyrga, Meyr., P. Linn Soc. N. S. W. VII 120 (1883) [Invalid ; no associated species].

Epipyr. EPIPYROPS, Westwood 1876.
T. E. S. 1876. 522, t. 7 : type *anomala*, Westw. [Hongkong].

Chlid. Epirrhoeca, Meyrick 1911. (CAENOGNOSIS, Wlsm.).
P. Linn. Soc. N. S. W. XXXVI 293 : type *neoris*, M. [Queensland].

Gel. Episacta, Turner 1919. (HYPATIMA, Hb.).
Proc. R. Soc. Queensl. XXXI 161 : type *discissa*, M. [Queensland].

Eucosm. Episagma, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz., p. 383 : type *schreberiana*, Linn. [Europe].

Aeg. EPISANNINA, Aurivillius 1905.
Ark. Zool. II. xii. 44 : type *chalybia*, Auriv. (W. Africa).
|| Sylphidia, Le Cerf 1911.

Tin. EPISCARDIA, Ragonot 1895.
Bull. S. E. Fr. 1895. 105 : type *lardatella*, Led. [N. Africa ; Asia Minor].

Eucosm. EPISIMUS, Walsingham 1892.
P. Z. S. 1891. 501-502 : type *transferana*, Wlk. [Brazil].

Blast. Epistetus, Walsingham 1894. (BLASTOBASIS, Zeller).
T. E. S. 1894. 552 : type *divisus*, Wlsm. [Madeira].

Gel. Epistomotis, Meyrick 1906. (HOLCOPOGON, Stdgr.).
B. J. XVII 416 : type [*robusta*, Butl.=] *penessa*, M. [India ; Ceylon].

Aeg. EPITARSIPUS, Le Cerf 1922.
Obth. Et. Lep. Comp. XIX 23 : type *rufithorax*, Le Cerf [Madagascar].

Gel. Epithectis, Meyrick 1895. (TAYGETE, Chambers).
Handb., p. 580 : type *lathyri*, Stainton [Europe.]

Glyph. EPITHETICA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 165 : type *typhoscia*, Turner [N. S. Wales].

Oec. EPITHYMEMA, Turner 1914.
P. Linn. Soc. N. S. W. XXXIX 562 : type *disparile*, Turner [N. S. Wales].

Tortr. Epitrichosma, Lower 1909. (SCHOENOTENES, Meyr.).
Tr. R. Soc. S. Austr. XXXII 320 : type *neurobapta*, Lower [N. E. Australia].

Tortr. Epitymbia, Meyrick 1881. (EPAGOGE, Hb.).
P. Linn. Soc. N. S. W. VI 657-658 : type *alaudana*, M. [E. Australia].

Adel. Epityphia, Hübner 1826. (NEMOPHORA' Hofm.).
Verz., p. 416 : type *latreillella*, Fb. [S. Europe ; N. Africa].

Ypon. EPOPSIA, Turner 1903.
P. Linn. Soc. N. S. W. XXVIII 89-90 : type *metreta*, Turner [N. Queensland].
? || Anticrates, Meyr. 1905. (q. v.).

Gel. EPORGASTIS, Meyrick 1921.
Ann. Transv. Mus. VIII 81-82 : type *maturata*, M. [Rhodesia].

Crypt. EPORYCTA, Meyrick 1908.
P. Z. S. 1908. 728 : type *tarbalea*, M. [S. Africa].

Lyonet. ERECHTHIAS, Meyrick 1880.
P. Linn. Soc. N. S. W. V 261-262 : type *charadrota*, M. [New Zealand].

Cosm. Erechthiodes, Meyrick 1914. (LIMNAECIA, Stainton).
Ann. Transv. Mus. IV 195 : type *audax*, M. [Transvaal].

Gel. EREMICA, Walsingham 1904.
E. M. M. XL 270 : type *saharae*, Wlsm. [N. Africa].

Ypon. Eremothyris, Walsingham 1897. (GYMNOGRAMMA, Zeller).
T. E. S. 1897. 47-48 : type *hollandi*, Wlsm. [W. Africa].

Tin. ERETMOBELA, Turner 1918.
Tr. R. Soc. Austr. XLII 282 : type *phaeosema*, Turner [Lord Howe Isd.].

Schreck. ERETMOCERA, Zeller. 1852.
Micr. Caffr., p. 96 : type *fuscipennis*, Zeller [E., W. & S. Africa].
|| Staintonia, Staudinger 1859.
|| Exodomorpha, Walker 1864.
|| Castorura, Meyrick 1886.
|| Aeraula, Meyrick 1897.

Lyonet. EREUNETIS, Meyrick 1880.
P. Linn. Soc. N. S. W. V 258 : type *juloptera*, M. [E. Australia].

Gel. Ergatis, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deutsch., Kleinschm. II. i. 295 : type *brizella*, Tr. [Europe].

Tortr. Ericia, Walker 1866 (*praeocc.*). (HOMONA, Wlk.).
Cat. XXXV. 1802 : type *aestivana*, Wlk.=*posticana*, Wlk. [New Guinea ; Philippines].

Tortr. Ericiana, Strand 1910. (HOMONA, Wlk.).
Soc. Ent. Stuttg. XXV 34 : type *aestivana*, Wlk. [New Guinea ; Philippines].

Gel. ERIDACHTHA, Meyrick 1910.
B. J. XX 440 : type *prolocha*, M. [S. India].
|| Corthyntis, Meyrick 1916.

Scythr. ERIGETHES, Walsingham 1907.
E. M. M. XLIII 56-57 : type *strobilacei*, Wlsm. [Algeria].
[Perhaps a synonym of *Scythris*, Hb.].

Eucosm. ERINAEA, Meyrick 1907.
B. J. XVIII 141 : type [*verditer*, Hmp.=] *chlorantha*, M. [Ceylon ; S. India].

Schreck. ERINEDA, Busck 1909.
Proc. E. S. Wash. XI 94-95 : type *elyella*, Busck. [N. America].

Micropt. Eriocephala, Curtis 1839. (MICROPTERIX, Hb.).
Brit. Ent. XVI 751 : type *calthella*, Linn. [Europe].

Incurv. ERIOCOTTIS, Zeller 1847.
Isis XL 812-813 : type *fuscanella*, Zeller [S. Europe ; N. Africa : Asia Minor].

Eriocran. ERIOCRANIA, Zeller 1850.
Linn. Ent. V 322-323, t. 1 ff. 14-16 : type *semipurpurella*, Stephens [Europe].
|| Chapmania, Spuler 1910 (*non-descr.;* praeocc.).
|| Allochapmania, Strand 1917 (*non-descr.*).

Oec. Eriodyta, Meyrick 1881. (PHILOBOTA, Meyrick).
P. Linn. Soc. N. S. W. VIII 514-515 : type *contentella*, Wlk. [Australia].
Eriodyta, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). [Invalid ; no associated species).

Crypt. ERIOGENES, Meyrick 1925.
Exot. Micr. III 159 : type *mesogypsa*, M. [New Guinea ; Ceram].

Eucosm. Eriopsela, Stainton 1859. (EUCOSMA, Hb.).
Manual II 267 : type *quadrana*, Hb. [Europe].
Eriopsela, Guenee, Ann. S. E. Fr. (2) III 163 (1845) (*non-descr.*).
Eriopsela, Stephens, List Brit. Anim. B. M. X 68 (1852) (*non-descr.*).

Lyonet. ERIOPTRIS, Meyrick 1915.
T. E. S. 1915. 244 : type *harmodia*, M. [Brit. Guiana].

Ypon. Eriopyrrha, Meyrick 1913. (LACTURA, Wlk.).
Exot. Micr. I 141 : type *colabristis*, M. [New Guinea].

Cosm. Eriphia, Chambers 1875 (*praeocc.*) (MOMPHA, Hb.).
Canad. Entom. VII 55 : type *concolorella*, Chambers [Kentucky].

Gel. ERIPNURA, Meyrick 1914.
T. E. S. 1914. 242 : type *cnodes* M. [Brit. Guiana].

Oec. ERISYPTILA, Meyrick 1914.
Exot. Micr. I. 232 : type *clevelandi*, Busck [Panama].

Cosm. Eritarbes, Walsingham 1909. (HAPLOCHROIS, Meyr.).
Biol. Centr. Am., Het. IV 7, f. 3 : type *otiosa*, Wlsm. [Mexico].

Oec. ERITHYMA, Meyrick 1914.
Exot. Micr. I 224 : type *cyanoplecta*, M. [Brit. Guiana].

Ypon. Erminea, Haworth 1811. (YPONOMEUTA, Latreille).
Lep. Brit. (III), p. 512 : type *evonymella*, Linn. [Europe].

Aluc. Ernestia, Tutt (*invalid*). (AGDISTIS, Hb).
Brit. Lep. V 128 (1906) (*non-descr.*) : type *lerinensis*, Mill [S. France].

Glyph. ERNOLYTIS, Meyrick 1922.
Exot. Micr. II 488 : type *chlorospora*, M. [Fiji].

Oec. EROTIS, Meyrick 1910.
B. J. XX 145 : type *phosphora*, M. [Ceylon].

Gel. ERYTHRIASTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 245 : type *rubentula*, M [Guiana].

Lyonet. ESCHATOTYPA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 256 : type *melichrysa*, M. [New Zealand].

Crypt. ESCHATURA, Meyrick 1897.
T. E. S. 1897. 382 : type *lemurias*, M. [Queensland].
|| Phloeophorba, Turner 1897.

Eucosm. Esia, Heinrich 1926. (ARGYROPLOCE, Hb.)
U. S. Nat. Mus. Bull. 132 pp. 109-110, ff. 56, 202 type *approximans*, Heinrich [N. America].

Oec. ESPERIA, Hübner 1826.
Verz., p. 418 : type *sulphurella*, Fb. [Europe].
|| Dasycerus, Haworth 1828 (*praeocc.*).
|| Dasycera, Stephens 1829.
|| Stenoptera, Duponchel 1838.

Eucosm. Ethelgoda, Heinrich 1926. (HEMIMENE, Hb.).,
U. S. Nat. Mus. Bull. 132, pp. 23-24, ff. 26, 122 : type *texanana*, Wlsm. [Texas ; Florida].

Schreck. ETHIRASTIS, Meyrick 1921.
Exot. Micr. II 462-463 : type *sideraula*, M. [Queensland].

Gel. ETHIROSTOMA, Meyrick 1914.
T. E. S. 1914. 244-245 : type *semiacma*, M. (Brit. Guiana).

Ypon. ETHMIA, Hübner 1822.
Verz., p. 163 : type *pyrausta*, Pallas [Europe].
|| Psecadia, Hb. 1826.
|| Anesychia, Hb. 1826.
|| Disthymnia, Hb. 1826.
|| Melanoleuca, Steph. 1829 (*non-descr.*).
|| Aedia, Dup. 1836 (*praeocc.*).
|| Chalybe, Dup. 1836.
|| Azinis, Wlk. 1863.
|| Tamarrha, Wlk. 1864.
|| Theoxenia, Wlsm. 1887.
|| Babaiaxa, Busck 1902.

Tin. Etnodona, Meyrick 1915. (CRITICONOMA, Meyr.).
Exot. Micr. I. 289 : type *phalacropis*, M. [Nyasaland].

Ypon. EUARNE, Saalmüller 1890.
Abh. Senck Ges. XV 340 : type *obligatella*, Möschler [Porto Rico].
|| *Acosmeta*, Möschler 1890 (*nom. nud.*).

Aeg. Eublepharis, Felder 1874 (*non-descr.* ; praeocc.). (MELITTIA, Hb.)
Reise Novara, Lep. Het., p. 4 : type *ruficincta*, Felder [S. America].

Blast. EUBOLEPIA, Dietz 1910.
Tr. Am. E. S. XXXVI 67 : type *anomalella*, Dietz [N. America].

Plut. EUCALANTICA, Busck 1904.
Proc. U. S. Nat. Mus. XXVII 750 : type *polita*, Wlsm. [California].

Schreck. EUCALYPTRA, Meyrick 1921.
Zool. Meded. VI 174-175 : type *picractis*, M. [Java].

Ypon. EUCATAGMA, Busck 1901.
Jl. N. Y. Ent. Soc. VIII 247, t. 9 f. 8 : type *amyrisella*, Busck [Florida].

Gel. Eucatoptus, Walsingham 1897. (ARISTOTELIA, Hb.).
P. Z. S. 1897. 69 : type *penicillata*, Wlsm. [W. Indies].

Ypon. Eucecidoses, Brèthes 1917. (? CECIDOSES, Curtis).
An. Ci. Argent. LXXXII 138 : type *minutana*, Brèthes [Argentina].

Eucosm. Eucelis, Hübner 1826. (EUCOSMA, Hb.].
Verz., p. 394 : type *aurana*, Fb. [Europe].

Plut. EUCERATIA, Walsingham 1881.
P. Z. S. 1881. 310 -: type *castella*, Wlsm. [California ; Oregon].

Lith. Eucestis, Hübner 1826. (LITHOCOLLETIS, Hb.).
Verz., p. 423 : type *ulmifoliella*, Hb. [Europe].

Oec. Euchaetis, Meyrick 1883. (HELIOCAUSTA, Meyr.).
P. Linn. Soc. N. S. W. VII 484 : type *habrocosma*, M. [N. S. Wales].

Oec. EUCHERSADAULA, Philpott 1926.
Tr. N. Z. Inst. LVI 414, figs. : type *lathriopa*, M. [New Zealand].

Orn. Euchiradia, Hübner 1826. (ORNEODES, Latreille).
Verz., p. 431 : type *hexadactyla*, Linn. [Europe].

Eucosm. Euchromia, Stephens 1834 (*praeocc.*). (ARGYROPLOCE, Hb.).
Ill. Brit. Ent. Haust. IV 143 : type [*rufana*, Scop.=] *purpurana*, Hw. [Europe].

Schreck. EUCLEMENSIA, Grote 1878.
Canad. Ent. X 69 : type *bassettella*, Clemens [N. America].
|| Hamadryas, Clemens 1864 (praeocc).

Oec. EUCLEODORA, Walsingham 1881.
T. E. S. 1881. 263 : type *chalybeella*, Wlsm. [S. Africa].

Aluc. Eucnaemidophorus, Wallengren 1881. (PLATYPTILIA, Hb.).
Ent. Tidskr. II 96 : type *rhododactyla*, Fb. [Europe ; Kashmir ; N. America].

Gel. EUCORDYLEA, Dietz. 1900.
Entl. News XI 349 : type *atropictella*, Dietz [U. S. America].

Eucosm. EUCOSMA, Hübner 1826.
Verz., p. 374 : type *circulana*, Hb. [N. America].
Eucosma, Hb., Zutrage Exot. Schmett. II 28 (1823) (*non-descr.*).
|| Epiblema, Hb. 1826.
|| Astatia, Hb. 1826.
|| Epinotia, Hb. 1826.
|| Asthenia, Hb. 1826.
|| Episagma, Hb. 1826.
|| Acalla, Hb. 1826.
|| Thiodia, Hb. 1826.
|| Panoplia, Hb. 1826.
|| Eucelis, Hb. 1826.
|| Paedisca, Tr. 1830.
|| Steganoptycha, Stephens 1834.
|| Poecilochroma, Stephens 1834.
|| Paragraphia, Sodoffsky 1837.
|| Zeiraphera, Curtis 1838.
|| Semasia, H. S. 1851.
|| Syndemis, H. S. 1851 (nec. Hb.).

|| Hypermecia, Stainton 1858.
|| Pardia, Stainton 1858.
|| Lithographia, Stainton 1858.
|| Phlaeodes, Stainton 1858.
|| Catoptria, Stainton 1858 (nec Hb.).
|| Halonota, Stainton 1858.
|| Cartella, Stainton 1858.
|| Pamplusia, Stainton 1859.
|| Eriopsela, Stainton 1859.
|| Calosetia, Stainton 1859.
|| Pygolopha, Lederer 1859.
|| Pelatea, Lederer 1859.
|| Cacochroea, Lederer 1859.
|| Pelochrista, Lederer 1859.
|| Monosphragis, Clemens 1860.
|| Ioplocama, Clemens 1860.
|| Catastega, Clemens 1861.
|| Affa, Walker 1863.
|| Euryptychia, Clemens 1865.
|| Callimosema, Clemens 1865.
|| Exentera, Grote 1877.
|| Proteopteryx, Walsingham 1879.
|| Exoria, Meyrick 1882 (nec Hb.),
|| Protithona, Meyrick 1882.
|| Exenterella, Grote 1883.
|| Epibactra, Ragonot 1894.
|| Sphaeroeca, Meyrick 1895.
|| Parienia, Berg 1899.
|| Maorides, Kirkaldy 1910.
|| Neurasthenia, Walsingham and Durrant.
|| Phaneta, Pierce 1922. [
|| Griselda, Heinrich 1923.
|| Gwendolina, Heinrich 1923.
|| Norma, Heinrich 1923.

Lith. Eucosmophora, Walsingham 1897. (ACROCERCOPS, Wlgn.).
P. Z. S. 1897. 148-149 : type *dives*, Wlsm. [W. Indies].

Tin. EUCROTALA, Meyrick 1917.
Exot. Micr. II 95 : type *nucleata*, M. [Assam].

Tin. EUCRYPTOGONA. Lower 1901.
Tr. R. Soc. S. Austr. XXV 97 : type *trichobathra*, Lower [N. S. Wales].

Gel. Eudactylota, Walsingham 1911. (NEODACTYLOTA, Busck).
Biol. Centr. Am., Het. IV 54-55, f. 15 : type *barberella*, Busck [N. America].

Tin. EUDARCIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad, 1860, p. 10 : type *simulatricella*, Clem. [Atlantic States].

Eucosm. Eudemis, Hübner 1826. (ARGYROPLOCE, Hb.)
Verz., p. 382 : type [*profundana*, Fb.=] *porphyrana*, Hb. [Europe].

Gel. Eudodacles, Snellen 1889. (BRACHMIA, Hb.)
Tijds. Ent. XXXII 204 : type *dimidiella*, Schiff. [Europe ; Turkestan].

Plut. Eudophasia, Herrich-Schäffer 1853. (EIDOPHASIA, Steph.).
Schmett. Eur. V 25-26, t. 10, ff. 32-33 : type *messingiella*, F. R. [Europe ; W. Asia].

Oec. EUDRYMOPSIS, Lower 1903.
Tr. R. Soc. S Austr. XXVII 228 : type *xyloscopa*, Lower [Australia].

Lyon. EUGENNAEA, Meyrick 1915.
Tr. N. Z. Inst. XLVII 232 : type *laquearia*, M. [New Zealand].

Phal. Eugnosta, Hübner 1826. (EUXANTHIS, Hb.).
Verz., p. 394 : type *lathoniana*, Hb. [Europe].

Aeg. EUHAGENA, Henry-Edwards 1881.
Papilio I 180 : type *nebraskae*, H.-Edw. [N. America].

Diplos. EUHYPOSMOCOMA, Swezey 1913.
Proc. Hawaii. Ent. Soc. II 277 : type *asplenii*, M. [Hawaii].

Oec. EULACHNA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 761 : type *dasyptera*, M. [E. Australia].
Eulachna, Mey., P. Linn. Soc. N. S. W. VII 421 (1883) [Invalid ; no associated species].

Oec. EULECHRIA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 508-509 : type *exanimis*, M. [Australia].
Eulechria, Mey., P. Linn. Soc. N. S. W. VII 424 (1883) [Invalid ; no associated species].
|| Linosticha, Meyrick 1883.
|| Macronemata, Meyrick 1883.

Tin. Eulepiste, Walsingham 1882. (ACROLOPHUS, Poey).
Tr. Am. Ent. Soc. X 169 : type *cressoni*, Wlsm. [Texas].

Tortr. EULIA, Hübner 1826.
Verz., p. 392 : type *ministrana*, Linn. [Europe].
|| Lophoderus, Stephens 1834.
|| Goboea, Walker 1866.

|| Mixogenes, Zeller 1877.
|| Orthocomotis, Dognin 1905.
|| Sociphora, Busck 1920.
|| Argyrotaenia, Pierce 1922. (Stephens 1852; *non-descr.*).

Lyon. Eulyonetia, Chambers 1880. (LYONETIA, Hb.).
Jl. Cinc. Soc. Nat. Hist. II 188: type *inornatella*, Chambers [Texas].

Aeg. Eumallopoda, Wallengren 1858. (MELITTIA, Hb.).
Kon. Vet. Akad. Handl. 1858, p. 84: type *laniremis*, Wlgn. [C. Colony.]

Eucosm. Eumarozia, Heinrich 1926. (ARGYROPLOCE, Hb.).
U. S. Nat. Mus. Bull. 132, pp. 110-111, ff. 60, 194: type *malachitana*, Zeller [U. S. America; C. & S. America].

Tin. EUMASIA, Chrétien 1904.
Bull. S. E. France 1904, p. 120: type *parietariella*, H. S. [Europe; N. Africa].
|| Trophimaea, Meyrick 1910.

Cosm. EUMENODORA, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 55: type *encrypta*, M. [Queensland].

Oec. Eumeyrickia, Busck 1902. (ATHEROPLA, Meyr.) (? EIDO, Chambers).
Jl. N. Y. Ent. Soc. X 94, t. 12, f. 3: type *trimaculellus*, Fitch [N. E. States; Canada].

Oec. Eumimographe, Dognin 1905. (HYPERCALLIA, Stephens).
Ann. S. E. Belg. XLIX 86: type *cupreata*, Dognin [Ecuador].

Crypt. EUMITURGA, Meyrick 1925.
Exot. Micr. III 177: type *flocculosa*, M. [Brazil].

Gel. EUNEBRISTIS, Meyrick 1923.
Exot. Micr. III 3: type *zachroa*, M. [Guiana].

Gel. Eunomarcha, Meyrick 1923. (ATOPONEURA, Busck).
Exot. Micr. III 26: type *glycinopis*, M. [Brazil].

Plut. Euota, Hübner 1826. (PLUTELLA, Schrank).
Verz., p. 408: type [*maculipennis*, Curtis=] *xylostella*, Hb. [Cosmopolitan].

Phal. Eupecilia, Herrich-Schäffer 1851. (EUXANTHIS, Hb.).
Schmett. Eur. IV 179: type *lathoniana*, Hb. [Europe to Armenia].

Diplos. EUPERISSUS, Butler 1881.
A. M. N. H. (5) VII 401: type *cristatus*, Butler [Hawaii].
|| Semnoprepia, Wlsm. 1907.

Crypt. EUPETOCHIRA, Meyrick 1917.
Exot. Micr. II 55-56 : type *xystopala*, M. [Transvaal].

Oec. EUPHILTRA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 158 : type *eroticella*, M. [N. S. Wales].

Eupist. EUPISTA, Hübner 1826.
Verz., p. 426 : type *ornatipennella*, Hb. [Europe].
|| Apista, Hb. 1826.
|| Haploptilia, Hb. 1826.
|| Porrectaria, Haworth 1828.
|| Damophila, Curtis 1832.
|| Astyages, Stephens 1834.
|| Metallosetia, Stephens 1834.
|| Ornix, Duponchel 1838 (nec Tr.).
|| Coleophora, Zeller 1839.
|| Casas, Wallengren 1881.
? || Casigneta, Wallengren 1881.

Oec. Eupleuris, Hübner 1826. (PLEUROTA, Hb.).
Verz., p. 406 : type *honorella*, Hb. [Europe].

Tin. EUPLOCAMUS, Latreille 1809.
Gen. Crust Ins. IV 223 : type *anthracinalis*, Scop. [Europe ; S. W. Asia.]
|| Epichysia, Hb. 1826.
|| Nycterina, Meigen 1832.

Tin. Euplocera, Ragonot 1895. (HAPSIFERA, Zeller).
Bull. S. E. France 1895, p. 101 : type *multiguttella*, Rag. [Taurus Mts.].

Phal Eupoecilia, Stephens 1834. (EUXANTHIS, Hb.).
Ill. Brit. Ent., Haust. IV 181 : type *angustana*, Hb. [Europe].
Eupoecilia, Steph., Cat. Brit. Ins. II 190 (1829) (*non descr.*).

Gel. EUPOLIS, Meyrick 1923.
Exot. Micr. II 625 : type *stygnota*, Wlsm. [S. America].

Gel. EUPRAGIA, Walsingham 1911.
Biol. Centr. Am., Het. IV 106-107, f. 22 : type *solida*, Wlsm. [Mexico].

Oec. EUPRIONOCERA, Turner 1896.
Tr. R. Soc. S. Austr. XX 6 : type *geminipuncta*, Turner [Queensland]. [Perhaps referable to Cryptophasidae].

Glyph. Euprophantis, Meyrick 1921. (GLYPHIPTERIX, Hb.).
Zool. Meded. VI 191 : type *autoglypta*, M. [Java].

Tin. EUPRORA, Busck 1906.
Proc. U. S. Nat. Mus. XXX 732, f. 8: type *argentilineella*, Busck [Texas].

Oec. EUPSELIA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 216: type *satrapella*, M. [Australia].
|| Allodoxa, Meyr. M. S.

Blast. EURESIA, Dietz 1910.
Tr. Amer. Ent. Soc. XXXVI 20: type *pulchella*, Dietz [U. S. America].

Lyon. Eurynome, Chambers 1875 (*praeocc.*). (PHILONOME, Chambers).
Cinc. Qly. Jl. Sci. II 304: type *luteella*, Chambers [Colorado].

Oec. Eurypelta, Turner 1894 (*praeocc.*). (EPICURICA, Meyr.).
Tr. R. Soc. S. Austr. XVIII 135: type *epiprepes*, Turner. [Queensland].

Aeg. EURYPHRISSA, Butler 1874.
A. M. N. H. (4) XIV 409: type *plumipes*, Wlk. [Brazil].

Oec. Euryplaca, Meyrick 1883. (HELIOCAUSTA, Meyr.).
P. Linn. Soc. N. S. W. VII 487-488: type *ocellifera*, M. [Australia].
Euryplaca, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). [Invalid; no associated species].

Eucosm. Euryptychia, Clemens 1865. (EUCOSMA, Hb.).
Proc. E. S. Philad. V 140: type (*scudderiana*, Clem. =) *saligneana*, Clem. [N. America].

Gel. Eurysara, Turner 1919. (DICHOMERIS, Hb.).
Proc. R. Soc. Queensl. XXXI 167: type *pleurophaea*, Turner [Australia].

Tortr. EURYTHECTA, Meyrick 1883.
Tr. N. Z. Inst. XV 56: type *robusta*, Butler [New Zealand].

Lyon. EURYTYLA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 565-566: type *automacha*, M. [N. S. Wales].

Gel. Euryzancla, Turner 1919. (DICHOMERIS, Hb.).
Proc. R. Soc. Queensl. XXXI 131: type *melanophylla*, Turner [Australia].

Eucosm. Euspila, Stephens 1834. (ENARMONIA, Hb.).
Ill. Brit. Ent., Haust. IV 103: type *compositella*, Fb. [Europe; Asia Minor].

Lith. Euspilapteryx, Stephens 1835. (CALOPTILIA, Hb.).
Ill Brit. Ent., Haust. IV 362-363: type [*phasianipennella*, Hb =] *auroguttella*, Stephens [Europe].

Lith. Euspilapteryx, Spuler 1910 (nec Steph.). (PARECTOPA, Clem.).
Schmett. Eur. II 408 : type *ononidis*, Zeller [Europe].

Lith. Euspilopteryx, Zeller 1847. (PARECTOPA, Clem.).
Linn. Ent. II 313-314, 347 : type *ononidis*, Zeller [Europe].

[NOTE.—This name is a mere emendation of Stephens' *Euspilapteryx* but Zeller's genus is the same as *Parectopa*, whereas Stephens' is the same as *Caloptilia*=*Gracillaria*].

Cosm. Eustaintonia, Spuler 1910. (BATRACHEDRA, H. S.).
Schmett. Eur. II 388, f. 149 : type *pinicolella*, Dup. [Europe].

Gel. EUSTALODES, Meyrick 1927.
Ins. Samoa III 82 : type *oenosema*, M. [Samoa].

Coprom. EUSTHENICA, Turner 1916.
Tr. R. Soc. S. Austr. XL 501 : type *megalaucha*, Turner [Australia].
[Possibly referable to Glyphipterygidae : see Turner, Tr. R. Soc. S. Austr. XLIX 46 (1925)].

Tin. Eusynopa, Lower 1903. (MONOPIS, Hb.).
Tr. R. Soc. S. Austr. XXVII 237 : type *chrysogramma*, Lower [Australia].

Crypt. Euteles, Heinemann 1870 (*praeocc*.). (ODITES, Wlsm.).
Schmett. Deutsch. Kleinschm II i. 333 : type *kollarella*, Costa [S. Europe ; Asia Minor].

Tin. Eutheca, Grote 1881 (*praeocc*.). (ACROLOPHUS Poey).
U. S. Geol. Surv. Bull. VI 257-258 : type *mora*, Grote. [Atlantic States].

Oec. EUTHICTIS, Meyrick 1914.
Exot. Micr. I 246 : type *xanthodelta*, M. [Australia].

Glyph. EUTHORYBETA, Turner 1913.
P. Linn. Soc. N. S. W. XXXVIII 200 : type *xanthoplaca*, Turner [N. S. Wales].

Oec. EUTORNA, Meyrick 1889.
Tr. N. Z. Inst. XXI 157 : type *caryochroa*, M. [New Zealand].
|| Phyzanica, Turner 1917.

Lith. Eutrichocnemis, Spuler 1910. (ACROCERCOPS, Wlgn.).
Schmett. Eur. II 409 : type *simploniella*, F. R. [Europe].

Glyph. Eutromula, Frölich 1829 (*non-descr*.). (ANTHOPHILA, Hw.).
Enum. Tortr. Würtemb., p. 11 . type *pariana*, Cl. [Europe].

Adel. Eutyphia, Hübner 1826. (NEMOPHORA, Hofm.).
Verz., p. 416 : type *degeerella*, Linn. [Europe ; Siberia].

Phal. EUXANTHIS, Hübner 1826.

Verz., p. 391 : type *hamana*, Linn. [Europe].
|| Pharmacis, Hb. 1823 (*praeocc.*).
|| Commophila, Hb. 1826.
|| Eugnosta, Hb. 1826.
|| Argyrolepia, Stephens 1834.
|| Eupoecilia, Steph. 1834.
|| Xanthosetia, Steph. 1834.
|| Eupecillia, H. S. 1851.
|| Hypostromatia, Zeller 1866.

Gel. EUZONOMACHA, Meyrick 1926.

Wyts. Gen. Ins., fasc. 184, p. 133: type *subjectella* Wlk. [S. America].

Gel. Evagora, Clemens 1860. (RECURVARIA, Hw.).

Proc. Acad. Nat. Sci. Philad. 1860, p. 165 : type *apicitripunctella*, Clem. [N. America].

Eucosm. EVETRIA, Hübner 1826.

Verz., pp. 378-379 : type *resinella*, Linn. [Europe].
|| Coccyx, Tr. 1830.
|| Orthotaenia, Curtis 1831.
|| Strobila, Sodoffsky 1837 (*praeocc.*).
|| Retinia, Stainton 1859. (Guenée 1845 : *non-descr.*).
|| Petrova, Heinrich 1923.
|| Barbara, Heinrich 1923.
|| Rhyacionia (nec. Hb.), Pierce 1922, Heinrich 1923, Forbes 1924.

Lyonet. Evexia, Gistel 1848. (TISCHERIA, Zeller).

(NOTE.—Exact reference is lacking; apparently *non-descr.*).

Gel. EVIPPE, Chambers 1873.

Canad. Ent. V 185-186 : type *prunifoliella*, Chambers (Kentucky).
|| Phaetusa, Chambers 1875.

Eucosm. Evora, Heinrich 1926. (ARGYROPLOCE, Hb.).

U. S. Nat. Mus. Bull. 132, pp. 189-190, ff. 55, 201 : type *hemidesma*. Zeller (N. America).

Crypt. EXACRISTIS, Meyrick 1921.

Ann. Transv. Mus. VIII 106 ; type *euryopa*, M. [Natal].

Oec EXAERETIA, Stainton 1849.

T. E. S. V 152 : type *allisella*, Stainton [Europe].

Lith. ? EXALA, Meyrick 1912.
Wyts. Gen. Ins., fasc. 128, p. 24, tab. ff. 23 *a-d* : type *strassenella*, Enderlein [New Amsterdam Isd.].
(*Note* : This may belong to Tineidae.)

Tin. EXANTHICA, Meyrick 1913.
Ann. Transv. Mus. III 320 : type *trigonella*, Felder [Transvaal].

Tortr. EXAPATE, Hübner 1826.
Verz., p. 387 : type *congelatella*, Clerck [Europe].
|| Scinipher, Frölich 1828 (*non-descr.*).
|| Oxypate, Stephens 1834.
|| Cheimaphasia, Curtis 1833.
|| Cheimonophila, Duponchel 1838.
|| Enyphantes, Pierce 1922 (Hb. 1806, Fern. 1908 : *non descr.*).

Oec. EXAPSIA, Meyrick 1914.
Exot. Micr. I 269 : type *paracycla*, Lower [N. S. Wales].

Eucosm. Exartema, Clemens 1860. (ARGYROPLOCE, Hb.).
Proc. Acad. Nat. Sci. Philad. XII 356 : type *nitidana*, Clemens [N. America].

Ypon. EXAULISTIS, Meyrick 1912.
Ann. Transv. Mus. III 77 : type *trichogramma*, M. [Transvaal].

Lyon. EXEGETIA, Braun 1918.
Entl. News XXIX 249-250 : type *crocea*, Braun [California].

Aluc. EXELASTIS, Meyrick 1907.
B. J. XVII 730 : type *atomosa*, Wlsm. [India].

Eucosm. Exentera, Grote 1877. (EUCOSMA, Hb.).
Canad. Entom. IX 227 : type [*improbana*, Wlk. =] *apriliana*, Grote [N. America].

Eucosm. Exenterella, Grote 1883. (EUCOSMA, Hb.).
Canad. Ent. XV 23 : type [*improbana*, Wlk. =] *apriliana*, Grote [N. America].

Blast. EXINOTIS, Meyrick 1916.
Exot. Micr. I 598 : type *catachlora*, M. [Ceylon ; India].

Schreck. Exodomorpha, Walker 1864. (ERETMOCERA, Zeller).
Cat. XXIX 833 : type [*laetissima*, Z. =] *divisella*, Wlk. [S. Africa].

Tin. EXONCOTIS, Meyrick 1919.
Exot. Micr. II 269 : type *increpans*, M. [French Guiana].

Adel. EXORECTIS, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 65 : type *autoscia*, M. [S. E. Australia].

Eucosm. Exoria, Meyrick 1882 (*praeocc.*). (EUCOSMA, Hb.).
N. Z. Jl. Sci. I 278 : type *mochlophorana*, M. [New Zealand].

Gel. EXOTELEIA, Wallengren 1881.
Ent. Tidskr. II 94-95 : type *dodecella*, Linn. [Europe].
|| Paralechia, Busck 1903.
|| Heringia, Spuler 1910 (*praeocc.*).
|| Heringiola, Strand 1917.

F

Oec. FABIOLA, Busck 1908.
Proc. U. S. Nat. Mus. XXXV 202 : type *shalleriella*, Chambers [U. S. America].

Crypt. FALCULINA, Zeller 1877.
H. S. E. R. XIII 387, t. 5 ff. 135 *a*, *b* : type *ochricostata*, Zeller [S. America].

Gel. Fapua, Strand 1910. (TECIA, Strand).
Berl. Ent. Zeit. LV 168 : type *albinervella*, Strand [Argentina].

Aeg. Fatua, Henry-Edwards 1882. (PARANTHRENE, Hb.).
Papilio II 97 : type *asilipennis*, Bdv. [East U. S. America].

Tin. Felderia, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887 140, 165 : type *cossoides*, F. & R. [Ypanema].

Tin. Fernaldia, Grote 1881. (SCARDIA, Tr.).
U. S. Geol. Surv. Bull. VI 274 : type *anatomella*, Grote [N. America].

Gel. Ficulea, Walker 1864. (GELECHIA, Hb.).
Cat. XXIX 794-795 : type *blandulella*, Wlk. [Ceylon].

Oec. FILINOTA, Busck 1911.
Proc. U. S. Nat. Mus. XL 206-207 : type *hermosella*, Busck [Guiana].
|| Lupercalia, Busck 1912.
|| Mnesichara, Wlsm. 1912.

Gel. FORTINEA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 3 : type *auriciliella*, Busck [Panama].

Aluc. Fredericina, Tutt 1906. (PLATYPTILIA, Hb.).
Brit. Lep. V 161 : type *calodactyla*, S. V. = *zetterstedtii*, Z. [Europe].
Fredericina, Tutt, Ent. Rec. XVII 37 (1905) (*non-descr.*).

Gel. FRISILIA, Walker 1864.
Cat. XXIX 795 : type *nesciatella*, Wlk. [Ceylon].
|| Tipasa, Wlk. 1864 (*praeocc.*).
|| Macrernis, Meyr. 1887.

Oec. FUCHSIA, Spuler 1910.
Schmett. Eur. II 346 : type *luteella*, Hein. [C. Europe].
|| Lesiandra, Meyr. 1914.

Oec Fugia, Duponchel 1846. (ANCHINIA, Hb.).
Cat. Meth. Lep. Eur., pp. 348-349 : type *daphnella*, Schiff. [Europe].

Psych. FUMARIA, Haworth 1811.
Lep. Brit., p. 473 : type [*casta*, Pallas =] *nitida*, Hw. [Europe].
|| Fumea, Haworth 1812.
|| Masonia, Tutt 1900.

Psych. Fumea, Haworth 1812. (FUMARIA, Hw.).
Tr. Ent. Soc. London I 310 : type [*casta*, Pallas =] *nitida*, Hw. [Europe].

G

Aeg. GAEA, Beutenmuller 1896.
Bull. Amer. Mus. N. H. VIII 115 : type *solitudo*, Hy.-Edw. [U. S. America].
|| Larunda, Hy.-Edw. 1881 (*praeocc.*).

Gel. GAESA, Walker 1864.
Cat. XXIX 803-804 : type *decusella*, Wlk. [Ceylon].

Ypon. GALACTICA, Walsingham 1911.
E. M. M. XLVII 14 : type *caradjae*, Wlsm. [Algeria].

Scythr. Galanthia, Hübner 1826. (SCYTHRIS, Hb.).
Verz., p. 417 : type *obscurella*, Scopoli. [Europe].

Tin. Galaria, Walker 1866. (MELASINA, Bdv.).
Cat. XXXV 1806 : type [*primella*, Z. =] *subauratana*, Wlk. [S. Africa].

Gel. GALTICA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 6 : type *venosa*, Busck. [Panama].

Gel. GAMBROSTOLA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 332 : type *imposita*, M. [Natal].

? GAPHARA, Walker 1864.
Cat. XXIX 794 : type *recitatella*, Wlk. [Ceylon].

[*Note.*—The type remains undeterminable.]

? GARGETTA, Walker 1865.
Cat. XXXII 455 : type *costigera*, Wlk. [Darjiling].

[*Note.*—Unidentified : probably not a Micro.]

Oec. Garrha, Walker 1866. (MACHIMIA, Clemens).
Cat. XXXV 1835 : type *sincerella*, Wlk. [Victoria].

Gel. GASMARA, Walker 1864.
Cat. XXX 1039 : type *coelatella*, Wlk. [Ceylon].
|| Antiochtha, Meyr. 1905.

Glyph. Gauris, Hübner 1826. (ANTHOPHILA, Hw.).
Verz., p. 374 : type *albertiana*, Cramer [S. & C. America].

Aluc. Geina, Tutt 1906. (OXYPTILUS, Zeller).
Brit. Lep. V 411 : type *didactylus*, Linn. [Europe].

Gel. GELECHIA, Hübner 1826.
Verz., p. 415 : type *rhombella*, Schiff. [Europe].
|| Chionodes, Hb. 1826.
|| Lita, Tr. 1833.
|| Guenea, Bruand 1847 (*non-descr.*).
|| Ficulea, Wlk. 1864.
|| Bryotropha, Hein. 1870.
|| Cirrha, Chambers 1872.
|| Pseudochelaria, Dietz 1900.

Tortr. GELOPHAULA, Meyrick 1923.
Tr. N. Z. Inst. LIV 163 : type *trisulca*, M. [New Zealand].

Crypt. GEMORODES, Meyrick 1925.
Exot. Micr. III 154 : type *diclera*, M. [Natal].

Gel. Geniadophora, Walsingham 1897. (TELPHUSA, Chambers).
P. Z. S. 1897. 71 : type *extranea*, Wlsm. [W. Indies].

Plut. GENOSTELE, Walsingham 1900.
Bull. Liverpool Mus. III 5 : type *renigera*, Wlsm. [Sokotra].

Lyon. Gephyristis, Meyrick 1909. (OINOPHILA, Stephens).
Ann. Transv. Mus. II 27 : type *anchiala*, M. [S. Africa].

Oec. GERDANA, Busck 1908.
Proc. U. S. Nat. Mus. XXXV 193 : type *caritella*, Busck. [U. S. America].

Tin. GERONTHA, Walker 1864.
Cat. XXIX 782 : type *captiosella*, Wlk. [Ceylon ; India].

Aluc. Gilbertia, Walsingham 1891 (*praeocc*). (WALSINGHAMIELLA, Berg.).
E. M. M. XXVII 259 : type *eques*, Wlsm. [W. Africa].

Aluc. Gillmeria, Tutt 1906. (PLATYPTILIA, Hb.).
Brit. Lep. V 220 : type *ochrodactyla*, Schiff. [Europe].
Gillmeria, Tutt, Ent. Rec. XVII 37 (1905) (*non-descr.*),

Gel. GLAPHYRERGA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 113 : type *mauricaudella*, Obth. [Algeria].

Cosm. GLAPHYRISTIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 357 : type *marmarea*, M. [N. S. Wales].

Gel. GLAUCE, Chambers 1875.
Canad. Ent. VII 11 : type *pectinalaeella*, Chambers. [N. America].

Stigm. GLAUCOLEPIS Braun 1917.
Tr. Amer. E. S. XLIII 201 : type *saccharella*, Braun [U. S. America].

Tin. GLAUCOSTOLA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 314 : type *orytcles*, M. [Cape Colony].

Aeg. Glossecia, Hampson 1919. (DIAPYRA, Turner).
Novit. Zool. XXVI 113 : type *igniflua*, Lucas. [Queensland].

Aeg. GLOSSOSPHECIA, Hampson 1919.
Novit. Zool. XXVI 83 : type *contaminata*, Butler. [Japan].

Crypt. GLYCYNYMPHA, Meyrick 1925.
Exot. Micr. III 155 : type *roseocostella*, Wlsm. = *sandycopa*, M. [Natal].

Gel. GLYPHIDOCERA, Walsingham 1892.
P. Z. S. 1891, 531, t. 41, f. 8 : type *audax*, Wlsm. [W. Indies].
|| Harpagandra, Meyr. 1918.

Tortr. GLYPHIDOPTERA, Turner 1916.
Tr. R. Soc. S. Austr. XL 505 : type *polymita*, Turner. [N. S. Wales].

Tortr. Glyphiptera, Duponchel 1834. (PERONEA, Curtis).
Hist. Nat. Lep. France IX 126 : type *literana*, Linn. [Europe].

Glyph. GLYPHIPTERIX, Hübner 1826.
Verz., p. 421 : type [*bergstraesserella*, Fb. =] *linneella*, Hb. [Europe]
|| Aechmia, Tr. 1833.
|| Heribeia, Stephens 1834.
|| Lepidotarphius, Pryer 1877.
|| Apistomorpha, Meyr. 1880.
|| Phryganostola, Meyr. 1880.
|| Circica, Meyr. 1888.
|| Desmidoloma, Erschoff 1892.
|| Euprophantis, Meyr. 1921.

Cosm. Glyphipteryx, Curtis 1827 (*praeocc.*). (CHRYSOCLISTA, Stt.).
Brit. Entom. IV 152 : type *linneella*, Cl. [Europe].

Tortr. Glyphisia, Stephens (*non-descr.*). (PERONEA, Curtis).
Ill. Brit. Ent., Haust. IV 166 (1834) (*non-descr.*).
Cat Brit. Ins. II 188 (1829) (*non-descr.*).

Schreck. GNAMPTONOMA, Meyrick 1917.
Exot. Micr. II 65 : type *leptura*, M. [Ecuador].

Gel. GNORIMOSCHEMA, Busck 1900.
Proc. U. S. Nat. Mus. XXIII 227 : type *gallaesolidaginis*, Riley. [Atlantic States].
|| Tuta, Strand 1911.

Gel. GNOSIMACHA, Meyrick 1927.
Exot. Micr. III 354 : type *catericta*, M. [Transvaal].

Tortr. Goboea, Walker 1866. (EULIA, Hb.).
Cat. XXXV 1805 : type *copiosana*, Wlk. [Australia].

Tortr. Godana, Walker 1866. (HOMONA, Wlk.).
Cat. XXXV, 1800-1801 : type [*menciana*, Wlk.=] *simulana*, Wlk. ♀ =*nubiferana*, Wlk. ♂. [S. E. Asia].

Eucosm. GODITHA, Heinrich 1926.
U. S. Nat. Mus. Bull. 132, *p.* 8, *f.* 24 : type *bumeliana*, Heinrich [Texas].

Gel. GOMPHOCRATES, Meyrick 1926.
Exot. Micr. III 288 : type *rasilella*, H. S. [Europe ; Kashmir].

Crypt. GOMPHOSCOPA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 86 : type *catoryctopsis*, Lower [Australia].

Oec. GONADA, Busck 1911.
Proc. U. S. Nat. Mus. XL 211 : type *falculinella*, Busck. [Guiana].

Gel. GONAEPA, Walker 1866.
Cat. XXXV 1840 : type *iosianella*, Wlk. [New Guinea].

Oec. Gonia, Heinemann 1870 (*praeocc.*). (PAROCYSTOLA, Turner).
Schmett. Deutsch., Kleinschm. II, i, 331-332 : type *pudorina*, Wocke. [Silesia].

Eupist. GONIODOMA, Zeller 1849.
Linn. Ent. IV 195, 196, 410 : type *auroguttella*, F. R. [Europe].

Crypt. Gonioma, Turner 1897. (UZUCHA, Wlk.).
Ann. Queensl. Mus. IV 27 : type *hypoxantha*, Lower [Australia].

Oec. Gonionota, Zeller 1877. (HYPERCALLIA, Stephens).
H. S. E. R. XIII 379, 381-382, t. 5, ff. 132 *a*, *b* : type *notodontella*, Z. [Colombia].

Crypt. Gonioterma, Walsingham 1897. (STENOMA, Zeller).
P. Z. S. 1897, 101 : type *burmanniana*, Stoll. [S. America].

Glyph. Gora, Walker 1862. (SAGALASSA, Wlk.).
T. E. S. (3) I. 89 : type *aequalis*, Wlk. [S. America].

Tin. GOURBIA, Chrétien 1900.
Naturaliste 1900, p. 119 : type *staphylinella*, Chrét. [Tunis].

Lith. Gracillaria, Haworth 1828. (CALOPTILIA, Hb.).
Lep. Brit., p. 527 : type [*syringella*, Fb. =] *anastomosis*, Hw. [Europe].
Gracilaria, Zeller, Isis XXXII 208-209 (1839) (*emend.*).

Lyonet. Gracillaroides, Bruand 1847 (*non-descr.*). (LYONETIA, Hb.).
Cat. Syst. Microlep. Doubs, p. 87 : type "*clerkella*, Linn." [Europe].

Eucosm. Grapholitha, Treitschke 1830. (ENARMONIA, Hb.).
Schmett. Eur. VIII 203 : type *dorsana*, Fb. [Europe ; Asia Minor].
Grapholita, Treits., Schmett. Eur. VII 232 (1829) (*non-descr*).

Eucosm. Gretchena, Heinrich 1923. (ACROCLITA, Lederer).
U. S. Nat. Mus. Bull. 123, pp. 179-180, ff. 14, 31, 317 : type *deludana*, Clemens [Atlantic States].

Incurv. GREYA, Busck 1903.
Proc. E. S. Wash. V 194 : type *punctiferella*, Wlsm. [California , Oregon].

Cosm. Griphocosma, Meyr MS. (MICROCOLONA, Meyr.).
(Unpublished MS. generic name for *citroplecta*, M. [India]).

Eucosm. Griselda, Heinrich 1923. (EUCOSMA, Hb.).
U. S. Nat. Mus. Bull. 123, p. 186, ff. 36, 329 : type *radicana*, Wlsm. [Oregon ; Brit. Columbia].

Aeg. Grotea, Möschler 1876. (PODOSESIA. Möschler).
Stett. ent. Ztg. XXXVII 314 : type *syringae*, Harris. [N. America].

Aeg. GRYPOPALPIA, Hampson 1919.
Novit. Zool. XXVI 52-53 : type *iridescens*, Hmp. [Natal].

Gel. GUEBLA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 324, f. 2 : type *compositella*, Chrét. [Algeria].

Gel. Guenea, Bruand 1847 (*non-descr.*). (GELECHIA, Hb.).
Cat. Microlep. Doubs, p. 77 : type *pinguinella*. Tr. [Europe].

Tin. GUENEA, Milliére 1874.
Icones III 436 : type *borreonella*, Mill. [Europe].
|| Ischnoscia, Meyr. 1895.

Oec. GUESTIA, Meyrick 1888.
P. Linn. Soc. N. S. W. XIII 1670-1671 : type *uniformis*, M [S. E. Australia].

Eucosm. Gwendolina, Heinrich 1923. (EUCOSMA, Hb.).
U. S. Nat. Mus. Bull. 123, pp. 188-189, ff. 32, 323 : type *concicatricana*, Heinrich. [U. S. America].

Eucosm. Gymnandrosoma, Dyar 1904. (ECDYTOLOPHA, Zeller).
Proc. E. S. Wash. VI 60 : type *punctidiscanum*, Dyar. [N. America].

Tin. GYMNELEMA, Heylaerts 1891.
C. R. Soc. Ent. Belg. XXXV, p. ccclxxv : type *rougemontii*, Heyl. [Delagoa Bay].

Oec. GYMNOBATHRA, Meyrick 1884.
Tr. N. Z. Inst. XVI 27-28 : type *flavidella*, Wlk. [New Zealand].
Gymnobathra, Mey., P. Linn. Soc. N. S. W. VII 425 (1883) (invalid ; no associated species).

Ypon. GYMNOGRAMMA, Zeller 1852.
Micr. Caffr., p. 104 : type *rufiventris*, Zeller. [S. Africa].
|| Eremothyris, Wlsm. 1897.

Tortr. GYNNIDOMORPHA, Turner 1916.
Tr. R. Soc. S. Austr. XL 518 : type *mesoxutha*, Turner. [N. Australia].

Tortr. Gynoxypteron, Speiser 1902. (TORTRICODES, Stainton).
Berlin Ent. Zeits. XLVII 143 : type *impar*, Stdgr. [S. Russia].

Aluc. Gypsochares, Meyrick 1890. (PSELNOPHORUS, Wlgn.).
T. E. S. 1890, 488 : type *baptodactylus*, Zeller. [S. Europe].

Eucosm. GYPSONOMA, Meyrick 1895.
Handb., p. 481 : type [*incarnana*, Hw. =] *dealbana*, Fröl. [Europe].

Plut. GYPSOSARIS, Meyrick 1909.
Ann. S. Afr. Mus. V. 375 : type *coniata*, M. [Cape Colony].

Tin. Gyra, Gistel 1848. (SCARDIA, Tr.).
Naturg. Thierr., p. X : type *boletella*, Fb. [Europe].

H

Gel. HABROGENES, Meyrick 1918.
Exot. Micr. II 102 : type *eupatris*, M. [Assam].

Tin. HABROPHILA, Meyrick 1889.
Tr. N. Z. Inst. XXI 161 : type *compseuta*, M. [New Zealand].

Oec. HABROSCOPA, Meyrick 1914.
Exot. Micr. I 223 : type *iriodes*, M. [E. Australia].

Agonox. HAEMOLYTIS, Meyrick 1926.
Exot. Micr. III 245-246 : type *miniana*, M. [Java].

Oec. Haemylis Treitschke 1832. (DEPRESSARIA, Hw.).
Schmett. Eur. IX, i, 235 : type *assimilella*, Tr. [Europe].

Oec. Hagno, Chambers 1872. (CRYPTOLECHIA, Zeller).
Canad. Entom. IV 129-132, 191 : type *faginella*, Chambers. [N. America].

Eucosm. Halonota, Stainton 1858. (EUCOSMA, Hb.).
Manual II 211 : type [*similana*, Hb. =] *bimaculana*. [Europe].
Halonota, Stephens, List Brit. Anim. B. M. X 45 (1852) (*non-descr.*).

Oec. HAMADERA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 22-23 : type *aurea*, Busck. [Panama].

Schreck. Hamadryas, Clemens 1864 (*praeocc.*). (EUCLEMENSIA, Grote).
Proc. E. S. Philad. II 422 : type *bassettella*, Clemens [N. America].

Gel. HAPALONOMA, Meyrick 1914.
T. E. S. 1914 244 : type [*sublustricella*, Wlk. =] *argyracta*, M. [Brit. Guiana ; Brazil ; Peru].

Gel. HAPALOSARIS, Meyrick 1917.
T. E. S. 1917, 37 : type *petulans*, M. [Colombia , Ecuador ; Peru].

Oec. HAPALOTEUCHA, Meyrick 1914.
Exot. Micr. I 251 : type *paragramma*, M. [E. Australia].

Lyon. HAPALOTHYMA, Meyrick 1919.
Exot. Micr. II 288 : type *xanthochorda*, M [Brit. Guiana].

Gel. HAPLOCHELA, Meyrick 1923.
Exot. Micr. III 32 : type *mundana*, M. [S. America].

Cosm. HAPLOCHROIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 310 : type *chlorometallu*, M. [N. S. Wales].
|| Eritarbes, Wlsm. 1909.

Oec. HAPLODYTA, Meyrick 1886.
P. Linn. Soc. N. S W. X 765 : type *thoracta*, M. [S. E.Australia].
Haplodyta, Mey., P. Linn. Soc. N. S. W. VII 422 (1883). (Invalid : no associated species).

Eupist. Haploptilia, Hübner 1826. (EUPISTA, Hb.).
Verz., p. 428 : type *coracipennella*, Hb. [Europe].

Tin. HAPSIFERA, Zeller 1847.
Isis XL 32 : type *luridella*, Zeller. [S. E. Europe ; S. W. Asia].
|| Cimitra, Walker 1864.
|| Autochthonus, Wlsm. 1891.
|| Scalidomia, Wlsm. 1891.
|| Euplocera, Ragonot 1895.
Dasyses, Durrant 1903.
Pitharcha, Meyr. 1908.

Arrhen. HARMACLONA. Busck 1914.
Proc. U. S. Nat. Mus. XLVII 63 : type *cossidella*, Busck. [Panama].

Gel. HARMATITIS, Meyrick 1910.
B. J. XX 460 : type *sphecopa*, M. [Ceylon].

Tortr. HARMOLOGA, Meyrick 1882.
N. Z. Jl. Sci. I 277 : type *oblongana*. Wlk. [New Zealand].
|| Trachybathra Meyr. 1907.

Aeg. Harmonia, Hy-Edwards 1882 (*praeocc.*). (PARHARMONIA, Beut.).
Papilio II 54 : type *morrisoni*, Hy.-Edw. [N. America].

Tin. HARMOTONA, Meyrick 1919.
Exot. Micr. II 255 : type *diplochorda*, M [Coorg].

Gel Harpagandra, Meyrick 1918. (GLYPHIDOCERA, Wlsm.).
Exot. Micr. II 210 : type *cryphiodes*, M. [Brit. Guiana].

Gel. HARPAGIDIA, Ragonot 1895.
Bull. S. E. France 1895, p. 107 : type *pallidibasella*. Rag. [Asia Minor].

Gel. HARPAGUS, Stephens 1834.
Ill. Brit. Ent., Haust. IV 278 : type "*cinctella*, Steph." [Europe]

[*Note*. *Harpagus*, Stephens, has precedence over *Stomopteryx*, Hein 1870, but the specific identity of the genotype of *Harpagus* is doubtful : it may be a prior name of *lacinella*, Zeller 1839.]

Crypt. Harpalyce, Chambers 1874 (*praeocc.*). (STENOMA, Zeller).
Canad. Ent. VI 234–235 : type *unipunctella*, Clemens. [N. America].

Ypon HARPEDONISTIS, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 591 : type *gonometra*, M. [E. Australia].

Oec. HARPELLA, Schrank 1802.
Fauna Boica II, ii, 168 : type [*forficella*, Scop. =] *proboscidella*. Sulz. [Europe ; Asia Minor].
|| Orophia, Hübner 1826.
|| Lampros, Tr. 1833.

Plut. Harpipterix, Hübner 1826. (YPSOLOPHUS, Fb.).
Verz., p. 407 : type [*xylostella*, Linn. =] *harpella*, Hb. [Europe].
Harpipteryx, Steph., Ill. Brit. Ent. Haust. IV 331 (1835).
Harpepteryx, Sodoffsky, Bull. Mosc. X, No. 6, p. 94 (1837).

Gel. HARPOGRAPTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 126-127 : type *eucharacta*, M. [Brazil].

Oec. HASTA, Busck 1911.
Proc. U. S. Nat. Mus. XL 210 : type *argentidorsella*, Busck. [Brazil].

Tortr. Hastula, Millière 1857. (PHILEDONE, Hb.).
Ann. S. E. Fr. (3) III 799 : type *hyerana*, Mill. [Europe].

Elach. Hecista, Wallengren 1881. (ELACHISTA, Tr.).
Ent. Tidskr. II 95 : type *argentella*, Cl. [Europe].

Lyon. HECTACMA, Meyrick 1915.
Tr. N. Z. Inst. XLVII 233-234 : type *chasmatias*, M. [New Zealand].

Oec. HEDNOPHORA, Meyrick 1911.
Ann. Transv. Mus. II 232-233 : type *pyritis*, M. [Transvaal].

Cosm. HEDROXENA, Meyrick 1924.
Exot. Micr. III 92 : type *barbara*, M. [New Hebrides].

Eucosm. Hedulia, Heinrich 1926. (ENARMONIA, Hb.).
U. S. Nat. Mus. Bull. 132, p. 65, ff. 162, 334 : type *injectiva*, Heinr. [U. S. America].

Eucosm. Hedya, Hübner 1926. (ARGYROPLOCE, Hb.).
Verz., p. 380 : type *salicella*, Linn. [Europe].
Hedia, Zeller, H. S. E. R. XIII 160 (1877) (*emend.*).

Ypon. Hedycharis, Turner 1903. (LACTURA, Wlk.).
P. Linn. Soc. N. S. W. XXVIII 90 : type *phoenobapta*, Turner [Queensland].

Cosm. Heinemannia, Wocke 1876. (MOMPHA, Hb.).
Schmett. Deuts., Kleinschm. II, ii, 427-428 : type *laspeyrella*, Hb. [Europe].

Gel. Helcystogramma, Zeller 1877. (ONEBALA, Wlk.).
H. S. E. R. XIII 371 : type *hibisci*, Stainton. [India].

Plut. HELENODES, Meyrick 1913.
Exot. Micr. I 151 : type *murmurata*, M. [Assam].

Gel. HELIANGARA, Meyrick 1906.
B. J. XVII 147 : type *lampetis*, M. [Ceylon].

Oec. HELICACMA, Meyrick 1914.
Exot. Micr. I 232 : type *catapasta*, M. [Assam].

Gel. HELICE, Chambers 1873.
Canad. Ent. V 187 188 : type *pallidochrella*, Chambers. [N. America].
|| Theisoa, Chambers 1874.
|| Cacelice, Busck 1902.

Eucosm. HELICTOPHANES, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 637-638 : type *uberana*, M. [N. S. Wales].

Eucosm. Heligmocera, Walsingham 1892. (ACROCLITA, Lederer).
P. Z. S. 1891, 597 : type *calvifrons*, Wlsm. [W. Indies].

Oec. HELIOCAUSTA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 466-467 : type *oecophorella*, Wlk. [S. Australia).
Heliocausta, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). (Invalid ; no associated species).
|| Euchaetis, Meyr. 1883.
|| Euryplaca, Meyr. 1883.

Phal. HELIOCOSMA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 693-694 : type *incongruana*, Wlk. [Australia ; New Guinea].

Schreck. Heliodines, Stainton 1854. (CHRYSOESTHIA, Hb.).
Lep. Brit. Tin., p. 243, t. 7 ff. 10 *a-c.* : type *roesella*, Linn. [Europe].

Glyph. HELIOSTIBES, Zeller 1874.
Verh. z.-b. Ges. Wien XXIV 434-435, t. 12 ff. 4 *a-b.* : type *mathewi*, Zeller. [Chile].

Helioz. HELIOZELA, Herrich-Schäffer 1853.
Schmett. Eur. V 56, t. 14 ff. 18-21 : type [*sericiella*, Hw. =] *metallicella*, Dup. [Europe].

Aluc. Hellinsia, Tutt (*non-descr.*). (OIDAEMATOPHORUS, Wlgn.).
Ent. Rec. XVII 37 (1905) (*nom-nud.*) : type *osteodactylus*, Zeller. [Europe].

Glyph. Hemerophila, Fernald 1900. (ANTHOPHILA, Hb.).
Canad. Ent. XXXII 239 : type *pariana*, Cl. [Europe ; N. America].
Hemerophila, Hb., Tentamen, p. 2 (1806) (*non-descr.*).

Eucosm. Hemerosia, Stainton 1859. (PAMMENE, Hb.).
Manual II 229 : type *rhediella*, Clerck. [Europe ; Asia Minor].
Hemerosia, Steph., List Brit. Anim. B. M. X 60 (1852) (*non-descr.*).

Gel. Hemiarcha, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 331 : type *thermochroa*, Lower. [S. E. Australia].

Oec. HEMIBELA, Turner 1894.
Tr. R. Soc. S. Austr. XVIII 136 : type *tyranna*, M. [Australia].

Eucosm. HEMIMENE, Hübner 1826.
Verz., pp. 377-378 : type *petiverella*, Linn. [Europe].
|| Heusimene, Stephens 1834 (*lapsus*).
|| Dichrorampha, Guenée 1845.
|| Lipoptycha, Lederer 1859.
|| Balbis, Walsingham 1897.
|| Ricula, Heinrich 1926.
|| Talponia, Heinrich 1926.
|| Ethelgoda, Heinrich 1926.

[Lithosiadae Hemonia, Walker 1863.
Cat. XXVIII 425-426 : type *orbiferana*, Wlk. [Ceylon].
[NOTE.—Not a microlepidopterous genus.]

Eucosm. HENDECANEURA, Walsingham 1900.
A. M. N. H. (7) VI 401 : type *impar*, Wlsm. [Japan].

Tortr. Hendecastema, Walsingham 1879. (AMORBIA, Clemens).
Ill. Typ. Het. IV 4-5 : type *cuneanum*, Wlsm. [N. America].

Eucosm. HENDECASTICHA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 692 : type *aethaliana*, M. [New Zealand].

Oec. Henicostoma, Spuler 1910. (ENICOSTOMA, Stephens).
Schmett. Eur. II 342 (*emend.*) : type *lobella*, Schiff. [Europe].

Aluc. HEPTALOBA, Walsingham 1885.
E. M. M. XXI 175 : type *argyriodactyla*, Wlk. [Ceylon].

Aluc. Herbertia, Tutt (*non-descr.*). (AGDISTIS, Hb.).
Brit. Lep. V 129 (1906) (*nom-nud.*) : type *tamaricis*, Zeller. [Europe to India].

Glyph. Heribeia, Stephens 1834. (GLYPHIPTERIX, Hb.).
Ill. Brit. Ent., Haust. IV 261-262 : type *haworthana*, Steph. [Europe].
Heribeia, Steph., Cat. Brit. Ins. II 207 (1829) (*non-descr.*).

Gel. Heringia, Spuler 1910 (*praeocc.*). (EXOTELEIA, Wlgn.).
Schmett. Eur. II 357, f. 124 : type *dodecella*, Linn. [Europe].

Gel. Heringiola, Strand 1917. (EXOTELEIA, Wlgn.).
Intern. Entom. Zeits. X 137 : type *dodecella*, Linn. [Europe].

Eucosm. HERMENIAS, Meyrick 1911.
P. Linn. Soc. N. S. W. XXXVI 225 : type *epidola*, M. [S. E. Australia].

Crypt. HERMOGENES, Zeller 1867.
Stett ent. Ztg. XXVIII 409-410, t. 2 ff. 6 *a-d* : type *aliferella*. Zeller [India].

Eucosm. HERPYSTIS, Meyrick 1911.
P. Linn. Soc. N. S. W. XXXVI 244 : type *avida*, M. [Queensland].

Oec. HERRICHIA, Staudinger 1871.
Berlin Ent. Zeits. XIV 292 : type *excelsella*, Stdgr. [Germany].

Ypon. HESPERARCHA, Meyrick 1918.
Ann. Transv. Mus. VI 38 : type *pericentra*, M. [Cape Colony].

Oec. Hesperoptila, Meyrick 1902. (HETEROZYGA, Meyr.).
Tr. R. Soc. S. Austr. XXVI 136-137 : type *arida*, M [W. Australia]

Tin. HESTIAULA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 589-590 : type *rhodacris*, M. [Queensland].

Gel. HETERALCIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 209 : type *tetraclina*, M. [Ceylon].

Oec. HETEROBATHRA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 89 : type *xiphosema*, Lower [N. S. Wales].

Oec. HETEROCHYTA, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 47 : type *xenomorpha*, M. [W. Australia].

Coprom. Heterocrita, Turner 1913 (*praeocc.*). (OSIDRYAS, Meyr.).
P. Linn. Soc. N. S. W. XXXVIII 222-223 : type *chersodes*, Turner [N. Queensland]. .

Carp. Heterocrossa, Meyrick 1882. (CARPOSINA, H. S.).
P. Linn. Soc. N. S. W. VII 178-179 : type *adreptella*, Wlk. [New Zealand].

Gel. HETERODELTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 211-212 : type *trichroa*, M. [Ceylon].

Tortr. Heterognomon, Lederer 1859. (TORTRIX, Linn.).
Wien. Ent. Mon. III 242, 247, t. 1 f. 6 : type *viridana*, Linn. [Europe].

Carp. HETEROGYMNA, Meyrick 1913.
Exot. Micr. I 73 : type *zacentra*, M. [India].

Epipyr. HETEROPSYCHE Perkins 1905.
Hawaii. Sugar Planters Assoc., Entl. Bull. No. 1, p. 81. f. 1 : type *melanochroma*, Perkins [N. S. Wales].

Oec. HETEROPTOLIS Meyrick 1914.
Exot Micr. I 221-222 : type *leucosta*, Lower. [S. Australia].

Aeg. HETEROSPHECIA, Le Cerf 1917.
Obth., Et. Lep. comp. XIV 243-244 : type *myticus*, Le Cerf. [Assam].
Heterosphecia, Le Cerf, Obth, Et. Lep. comp. XII 9 (1916) (*non descr.*)

Cosm. HETEROTACTIS, Meyrick 1928.
Exot. Micr. III 392 : type *quincuncialis*, M. [India].

Gel. HETEROZANCLA, Turner 1919.
Proc R. Soc. Queensl. XXXI 134 : type *rubida*, Turner. [Victoria].

Oec. HETEROZYGA, Meyrick 1885.
P. Linn. Soc. N. S. W. IX 1048 : type *coppatias*, M. [Australia].
Heterozyga, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). (Invalid ; no associated species).
|| Hesperoptila, Meyr. 1902.

Eucosm. Heusimene, Stephens 1834 (*lapsus*). (HEMIMENE, Hb.).
Ill. Brit. Ent., Haust. IV 96-97 : type *petiverella*, Linn. [Europe].

Aluc. HEXADACTILIA, Fletcher 1910.
T. E. S. 1910, 108 : type *trilobata*, Fletcher. [New Guinea].

Eperm. Heydenia, Hofmann 1868 (*praeocc.*) (CATAPLECTICA, Wlsm.).
Stett. Ent. Ztg. XXIX 293 : type *devotella*, Heyd. [Europe].

Tin. Hibita, Walker 1863. (ACROLOPHUS, Poey).
Cat. XXVII 10 : type *arcturella*, Wlk. [Brazil].

Gel. HIERANGELA, Meyrick 1894.
T. E. S. 1894, 14 : type *erythrogramma*, M. [Burma].

Lyon. HIEROCROBYLA, Meyrick 1915.
Exot. Micr. I 353 : type *orthopyrrha*, M. [India].

Glyph. HIERODORIS, Meyrick 1912.
Exot. Micr. I 41 : type *iophanes*, M. [New Zealand].

Schreck. HIEROMANTIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 315 : type *ephodophora*, M. [E. Australia].

Oec. Hieropola, Meyrick 1883. (TISOBARICA, Wlk.).
P. Linn. Soc. N. S. W. VIII 363-364 : type (*eranna*, Turner =) *jucundella*, Meyr. nec Wlk. [E. Australia].
Hieropola, Meyr., P. Linn. Soc. N. S. W. VII 424 (1883) (Invalid ; no associated species).

Lyon. Hieroxestis, Meyrick 1892. (OPOGONA, Zeller).
P. Linn. Soc. N. S. W. XVII 567 : type *omoscopa*, M. [E. Australia ; New Zealand].

Glyph. HILAROGRAPHA, Zeller 1877.
H. S. E. R. XIII 187 : type *swederiana*, Stoll. [C. & S. America].
|| Idiothauma, Wlsm. 1897.
|| Thaumatographa, Wlsm. 1897.

Oec. HIMOTICA, Meyrick 1912.
T. E. S. 1911, 705 : type *thyrsitis*, M. [Brazil].

Gel. Hinnebergia, Spuler 1910. (RECURVARIA, Haworth).
Eur. Schmett. II 356 : type *nanella*, Hb. [Europe].

Lyon. HIPPIOCHAETES, Meyrick 1880.
P. Linn. Soc. N. S. W. V, 253 : type *chrysaspis*, M. [N. S. Wales].

Oec. HIPPOMACHA, Meyrick 1914.
Exot. Micr. I 244 : type *callista*, M. [N. S. Wales].

Lith. Hirsuta, Bruand 1847 (*non-descr.*). (LITHOCOLLETIS, Hb.).
Cat. Syst. Microlep. Doubs, p. 84 : type [populifoliella, Tr. =] "fritilella, Tisch. M. S." [Europe].

Crypt. HODEGIA, Walsingham 1907.
Faun. Hawaii. I 488 : type *apatela*, Wlsm. [Hawaii].

Ypon. Hofmannia, Wocke 1876. (ZELLERIA, Stainton).
Hein. Schmett. Deuts., Kleinschm. II ii 644 : type *saxifragae*, Stt. [Europ. Alps].

Orn. Hofmannia, Pagenstecher 1900 (*praeocc.*). (TRISCAEDECIA, Hmp.)
Zoologica XXIX 241 : type *septemdactyla*, Pag. [Solomon Isds.].

Oec. Hofmannophila, Spuler 1910. (BORKHAUSENIA, Hb.).
Schmett. Eur. II 340, f. 111 : type *pseudospretella*, Stt. [Europe ; N. America, etc.].

Tin. HOLACARTA, Meyrick 1917.
Exot. Micr. II 87 : type *satyrodes*, M. [New Guinea].

Gel. HOLAXYRA, Meyrick 1913.
B. J. XXII 176 : type *ampycota*, M. [Ceylon].

Blast. HOLCOCERA, Clemens 1863.
Proc. E. S. Philad. II 121 : type *chalcofrontella*, Clemens. [N. America].
|| Hypatima, H.S. 1853 (nec Hb. 1826).
|| Hypatopa, Wlsm. 1907.
|| Cynotes, Wlsm. 1907.
|| Catacrypsis, Wlsm. 1907.
|| Prosodica, Wlsm. 1907.
|| Calosima, Dietz 1910.

Gel. HOLCOPHORA, Staudinger 1871.
Berlin Ent. Zeits. XIV 313 : type *statices*, Stdgr. [S. E. Russia].

Gel. HOLCOPOGON, Staudinger 1880.
H. S. E. R. XV 330 : type *bubulcella*, Stdgr. [S. W. Europe].
|| Cyrnia, Wlsm. 1900.
|| Epistomotis, Meyr. 1906.

Helioz. Holocacista, Walsingham & Durrant 1909. (ANTISPILA, Hb.).
E. M. M. XLV 165 : type *rivillei*, Stt. (S. Europe).
Holocacista, Wlsm. & Drt., Proc. Ent. Soc. London 1909, p. 29 (1909) (*non-descr.*).

Eucosm. Holocola, Meyrick 1881. (ACROCLITA, Lederer).
P. Linn. Soc. N. S. W. VI 669-670 : type *thalassinana*, M. [N. S. Wales].

Gel. HOLOPHYSIS, Walsingham 1910.
Biol. Centr. Am., Het. IV 29-30, f. 9 : type *emblemella*, Clemens. [N. America].

Oec. Holoscolia, Zeller 1839. (PLEUROTA, Hb.).
Isis XXXII 190 : type *forficella*, Hb. [Europe].

Ypon. HOMADAULA, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 73 : type *myriospila*, M. [Australia].

Cosm. HOMALEDRA, Busck 1900.
Proc. U. S. Nat. Mus. XXXIII 236-237, t. 1 f. 10 : type *heptathalama*, Busck [Florida].

Tortr. HOMALERNIS, Meyrick 1908.
B. J. XVIII 620 : type *semaphora*, M. [India].

Tin. HOMALOPSYCHA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 304 : type *aestuaria*, M. [Cape Colony].

Gel. HOMALOXESTIS, Meyrick 1910.
B. J. XX 140 : type *endocoma*, M. [S. India].

Tin. HOMILOSTOLA, Meyrick 1917.
Exot. Micr. II 92 : type *taeniata*, M. [French Guiana].

Tin. HOMODOXUS, Walsingham 1914.
Biol. Centr. Am., Het. IV 354 : type *aristula*, Wlsm. [C. America].

Cosm. Homoeoprepes, Walsingham 1909. (MOMPHA, Hb.).
Biol. Centr. Am., Het. IV 10, f. 4 : type *trochiloides*, Wlsm. [Costa Rica].

Aeg. HOMOGYNA, Le Cerf 1912.
Bull. Mus. Hist. Nat. Paris XVII 303, f. 2 : type *alluaudi*, Le Cerf. [Brit. E. Africa].

Tortr. HOMONA, Walker 1863.
Cat. XXVIII 424 : type [*coffearia*, Nietner =] *fasciculana*, Wlk. [India ; Ceylon ; Formosa, etc.].
|| Godana, Wlk. 1866.
|| Ericia, Wlk. 1866 (*praeocc.*).
|| Aesiocopa, Zeller 1877.
|| Anisogona, Meyr. 1881.
|| Ericiana, Strand 1910.

Tin. Homonymus, Walsingham 1887. (ACROLOPHUS, Poey).
Proc. Ent. Soc. London, p. liv : type *corrientis*, Wlsm. [S. America].

Glyph. HOMOPLASTIS, Meyrick 1926.
Sarawak Mus. Jl. III 162 : type *agathoclea*, M. [Borneo].

Oec. HOMOSACES, Meyrick 1894.
T. E. S. 1894. 20 : type *anthocoma*, M. [Burma].

Tin. HOMOSETIA, Clemens 1863.
Proc. E. S. Philad. II 127 : type *tricingulatella*, Clemens (N. America].
|| Pitys, Chambers 1873 (*praeocc.*).
|| Semele, Chambers 1875.
|| Calostinca, Dietz 1905.

Tin. HOMOSTINEA, Dietz 1905.
Tr. Amer. E. S. XXXI 71, t. 6 f. 8 : type *curviliniella*, Dietz [S. E. U. S. Am.].
|| Xystrologa, Meyr. 1919.

Blast. HOMOTHAMNIS, Meyrick 1921.
Ann. Transv. Mus. VIII 117 : type *litholeuca*, M. [Port. E. Africa].

Oec. Hoplitica, Meyrick 1883. (MACHIMIA, Clemens).
P. Linn. Soc. N. S. W. VII 193-494 : type *carnea*, Zeller [E. Australia].

Oec. Hoplomorpha, Turner 1916. (MACHIMIA, Clemens).
P. Linn. Soc. N. S. W. XLI 373 : type *abalienella*, Wlk. [E. Australia].

Helioz. HOPLOPHANES, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 409 : type *tritocosma*, M. [Australia].

Glyph. HOPLOPHRACTIS, Meyrick 1920.
Exot. Micr. II 326 : type *heptachalca*, M. [Brazil].

Oec. HOPLOSTEGA, Meyrick 1914.
Exot. Micr. I 235 : type *ochroma*, M. [Australia].

Tin. HORMANTRIS, Meyrick 1927.
Exot. Micr. III 327 : type *astragalspa*, M. [Colombia].

Eucosm. Hulda, Heinrich 1926. (ENDOTHENIA, Heinrich).
U. S. Nat. Mus. Bull. 132, p. 108, ff. 52, 193 : type *impudens*, Wlsm. [N. America].

Crypt. Hyale, Chambers 1880. (MENESTA, Clemens 1860).
Cinc. Qly. Jl. Sci. II 242 . type [*tortriciformella*, Clemens =] *coryliella*, Chambers [Atlantic States].

Oec. HYALOCHNA, Meyrick 1918.
Ann. Transv. Mus. VI 30 : type *allevata*, M. [Natal].

Crypt. HYALOPSEUSTIS, Meyrick 1925.
Exot. Micr. III 157 : type *vitrea*, M. [Peru].

Tin. Hyalospila, Herrich-Schäffer 1853. (MONOPIS, Hb.).
Schmett. Eur. VI, Microlep. p. v, t. 10 f. 14 [neur.]: type *rusticella*, Hb. [Europe].

Oec. HYBOCROSSA, Turner 1917.
Tr. R. Soc. S. Austr. XLI 105: type *paratypa*, Turner (N. S. Wales].

Tin. HYBROMA, Clemens 1862.
Proc. E. S. Philad. I 136-137: type *servulella*, Clemens [Pennsylvania].

Gel. HYGROPLASTA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 244: type *spoliatella*, Wlk. [Ceylon; India].

Tin. HYLADAULA, Meyrick 1920.
Exot. Micr. II 355-356: type *perniciosa*, M. [India].

Gel. HYLOGRAPTIS, Meyrick 1910.
T. E. S. 1910. 450-451: type *thryptica*, M. [New Guinea].

Crypt. Hylypnes, Turner 1897. (ODITES, Wlsm.).
Ann. Queensl. Mus. IV 15: type *pudica*, Lower [Queensland].

Aeg. HYMENOSPHECIA, Le Cerf 1917.
Obth. Et. Lep. comp. XIV 283: type *albomaculata*, Le Cerf [Uganda].

Gel. HYODECTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 411: type *crenoides*, M. [S. E. Australia].

Tin. Hyoprora, Meyrick 1908. (ATELIOTUM, Zeller).
P. Z. S. 1908. 753-754: type *crymodes*, M. [Transvaal].

Crypt. Hyostola, Meyrick 1908. (PROCOMETIS, Meyr.).
P. Z. S. 1908. 730: type *acharma*, M. [S. Africa].

Aeg. HYPANTHEDON, Hampson 1919.
Novit. Zool. XXVI 62: type *marisa*, Druce (C. & S. Africa].

Gel. HYPATIMA, Hübner 1826.
Verz., p. 415: type *conscriptella*, Hb. [Europe].
|| Chelaria, Haworth 1828.
|| Psoricoptera, Stainton 1854.
|| Cymatomorpha, Meyr. 1904.
|| Deuteroptila, Meyr. 1904.
|| Allocota, Meyr. 1904.
|| Semodictis, Meyr. 1910.
|| Episacta, Turner 1919.

Blast. Hypatima, Herrich-Schäffer 1853 (nec Hb.). (HOLCOCERA, Clemens).
Schmett. Eur. V 47, t. 13 ff. 15-17: type *inunctella*, Zeller [C. & S. Europe].

Blast. Hypatopa, Walsingham 1907. (HOLCOCERA, Clemens).
Proc. U. S. Nat. Mus. XXXIII 200, 211 : type *inunctella*, Zeller [C. & S. Europe].

Gel. HYPELICTIS, Meyrick 1905.
B. J. XVI 600 : type *acrochlora*, M. [Ceylon].

Oec. HYPERCALLIA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 194 : type [*citrinalis*, Scop. =] *christiernana*, Linn. [Europe ; N. Asia].
|| Coptotelia, Zeller 1863.
|| Gonionota, Zeller 1877.
|| Brachyplatea, Zeller 1877.
|| Agriocoma, Zeller 1877.
|| Callistenoma, Butler 1883.
|| Hyphypena, Warren 1889.
|| Eumimographe, Dognin 1905.

Diplos. HYPERDASYS, Walsingham 1907.
Faun. Hawaii. I 640 : type *cryptogamiellus*, Wlsm. [Hawaii].

Gel. HYPERECTA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 132 : type *enoptrias*, M. [Assam].

Crypt. Hypereuryntis (*see* HYPEURYNTIS).

Eucosm. Hypermecia, Stainton 1858. (EUCOSMA, Hb.).
Manual II 191 : type [*cruciana*, Linn. =] *angustana*, Hb. [Europe].
Hypermecia, Guenée, Ann. S. E. Fr. (2) III 173 (1845) (*non-descr.*).
Hypermecia, Steph., List. Brit. Anim. B. M. X 41 (1852)(*non-descr.*).

Gel. HYPEROCHTHA, Meyrick 1926.
Wyts. Gen. Ins., fasc 184, p. 227 : type *butyropa*, M. [Ceylon].

Glyph. Hyperperissa, Walsingham 1900. (IMMA, Wlk.)
Cat. Het. Mus. Oxon. II 546 : type *aurantiaca*, Semper [Philippines].

Oec ? HYPERSKELES, Butler 1883.
T. E. S. 1883. 78 : type *choreutidia*, Butler [Chile].
[*Note.*—The description of this genus is inadequate for its recognition or location.]

Oec. HYPERSYMMOCA, Chrétien 1917
Ann. S. E. Fr. LXXXV 485 : type *faecivorella*, Chrét. [Algeria].

Crypt. Hypertricha, Meyrick 1890. (BOYDIA, Newman).
Tr. R. Soc. S. Austr. XIII 74 : type *ephelota*, M. [S. Australia].

Hypertroph. HYPERTROPHA, Meyrick 1880.
P. Linn. Soc. N. S. W. V 208-209 : type [*desumptella*, Wlk. =] *thesaurella*, M. [Australia].

Plut. HYPERXENA, Meyrick 1882.
P. Linn. Soc. N. S. W. VII 177 : type *scierana*, M. [N. S. Wales].

Crypt. HYPEURYNTIS, Meyrick 1897.
T. E. S. 1897. 389 : type *coricopa*, M. [New Zealand].
Hypereuryntis, Meyr., Tr. N. Z. Inst. XLVII 221 (1915).

Ypon. Hyphantes, Hübner 1806 (*non-descr.*). (YPONOMEUTA, Latreille).
Tentamen, p. 2 (*nom. nud.*) : type " *evonymella*."

Oec. Hyphypena, Warren 1889. (HYPERCALLIA, Stephens).
T. E. S. 1889. 231-232 : type *bipunctalis*, Warren [Brazil].

Gel. Hypococis, Walsingham 1904 (*nom. nud.*). (SCLEROCECIS, Chrétien).
E. M. M. XL 215 :

Tin. Hypoclopus, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887. 140, 144 : type *griseus*, Wlsm. [Arizona].

Plut. Hypolepia, Guenée (*non-descr.*). (YPSOLOPHUS, Fb.)
Ann. S. E. F. (2) III 337 (1845) (*non-descr.*).
Gn., Eur. Micr. Index, p. 99 (1846) (*non-descr.*).

Aeg. HYPOMELITTIA, Hampson 1919.
Novit. Zool. XXVI 96 : type *hyaloptera*, Hmp. [Burma].

Ypon. Hyponomeuta (*see* YPONOMEUTA).

Tin. HYPOPHRICTIS, Meyrick 1916.
Exot. Micr. I 604-605 : type *inceptrix*, M. [Ceylon ; India].

Tin. HYPOPHRICTOIDES, Roepke 1925.
Tijds. Ent. LXVIII 182, ff. 3, 4 : type *dolichoderella*, Roepke [Java].

Tin. HYPOPLESIA, Busck 1906.
Proc. U. S. Nat. Mus. XXX 735 : type *buschiella*, Dietz [Arizona].
|| Paraplesia, Dietz 1905 (*præocc.*).

Diplos. HYPOSMOCHOMA, Butler 1881.
A. M. N. H. (5) VII 399 : type *blackburni*, Butler [Hawaii].
Hyposmocoma, Wlsm., Faun. Hawaii. I 549 (1907) (*emend.*).

Phal. Hypostromatia, Zeller 1866. (EUXANTHIS, Hb.)
Stett. ent. Ztg. XXVII 141-142 : type *versicolorana*, Z. [Colombia].

Oec. Hypsipelon, Chrétien 1915. (CRYTOLECHIA, Zeller).
Ann. S. E. Fr. LXXXIV 328, f. 4 : type *rigidella*, Chrét. [Algeria].

Plut. Hypsolopha, Hübner 1826. (YPSOLOPHUS, Fb.)
Verz., p. 407 : type *asperella*, Linn. [Europe].

Gel. Hypsolophus, Herrich-Schäffer 1853. (DICHOMERIS, Hb.)
Schmett. Eur. V 42, t. 12 ff. 23, 24-27 : type *marginellus*, Fb. [Europe].

Gel. HYPTIASTIS, Meyrick 1911.
B. J. XX 733 : type *clematias*, M. [S. India].

Phal. Hysterosia, Meyrick 1895. (IDIOGRAPHIS, Lederer).
Handb., p. 559 : type *inopiana*, Haworth (Europe].
Hysterosia, Stephens, List Brit. Anim. B. M. X 85 (1852) (*non-descr.*).

Eucosm. HYSTRICHOPHORA, Walsingham 1879.
Ill. Het. IV 64-65 : type *leonana*, Wlsm. [California].

Eucosm. HYSTRICHOSCELUS, Walsingham 1900.
A. M. N. H. (7) VI 335 : type *spathanum*, Wlsm. [Japan].

I

Aeg. Ichneumonoptera, Hampson 1893. (CONOPIA, Hb.)
Faun. Ind., Moths I 187, 194 : type *auripes*, Hmp. [India].

Blast. ICONISMA, Walsingham 1897.
P. Z. S. 1897. 96 : type *macrocera*, Wlsm. [W. Indies].

Crypt. Ide, Chambers 1880. (STENOMA, Zeller).
Jl. Cinc. Soc. Nat. Hist. II 180 : type *unipunctella*, Clemens [N. America].

Gel. Idiobela, Turner 1919 (PROSELOTIS, Meyr.).
Proc. R. Soc. Queensl. XXXI 111 : type *ischnoptila*, Turner [Queensland].

Oec. IDIOCRATES, Meyrick 1909.
T. E. S. 1909, 19 : type *balanitis*, M. [Bolivia].

Eperm. IDIOGLOSSA, Walsingham 1881.
T. E. S. 1881, 273 : type *bigemma*, Wlsm. [S. Africa ; Mauritius].
|| Metamorpha, Frey 1878 (*praeocc.*).
|| Idiostoma, Wlsm. 1882.

Phal. IDIOGRAPHIS, Lederer 1859.
Wien. Ent. Mon. III 242, 246 : type *inopiana*, Haworth [Europe].
|| Hysterosia, Meyrick 1895. (Steph. 1852 : *non-descr.*).

Gel. Idiophantis, Meyrick 1904. (COLOBODES, Meyr.).
P. Linn. Soc. N. S. W. XXIX 298 : type *habrias*, M. [Queensland]

Gel. IDIOPTERYX, Walsingham 1891.
T. E. S. 1891, 104 : type *obliquella*, Wlsm. [Natal].
|| Dragmatucha, Meyr. 1908.

Ypon. Idioptila, Meyrick 1927. (PYRAMIDOBELA, Braun).
Exot. Micr. III 343-344 : type *agyrtodes*, M. [Texas].

Eperm. Idiostoma, Walsingham 1882. (IDIOGLOSSA, Wlsm.).
Tr. Am. Ent. Soc. X 199-200 : type *bigemma*, Wlsm. [S. Africa : Mauritius].

Cosm. IDIOSTYLA, Meyrick 1921.
Exot. Micr. II 412 : type *oculata*, M. [Fiji].

Tin. IDIOTECHNA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 305 : type *furcifera*, M. [Cape Colony].

Glyph. Idiothauma, Walsingham 1897. (HILAROGRAPHA, Zeller).
T. E. S. 1897, 49-50 : type *africana*, Wlsm. [C. Africa].

Tortr. IDOLATTERIA, Walsingham 1913.
Biol. Centr. Am., Het. IV 214 : type *simulatrix*, Wlsm. [Guatemala].

Gel. ILINGIOTIS, Meyrick 1914.
T. E. S. 1914, 275 : type *sevectella*, Wlk. [S. America].
|| Sirogenes, Meyr. 1923.

Elach. ILLANTIS, Meyrick 1921.
Zool. Meded. VI 186-187 : type *picroleuca*, M. [Java].

Crypt. Illidgea, Turner 1897. (PHTHONERODES, Meyr.).
Ann. Queensl. Mus. IV 26 : type *epigramma*, Meyr. [Australia].

Glyph. IMMA, Walker 1858.
Cat. XVI 195 : type *rugosalis*, Wlk. [Ceylon].
|| Pingrasa, Wlk. 1858.
|| Tortricomorpha, Felder 1861.
|| Moca, Wlk. 1863.
|| Adricara, Wlk. 1863.
|| Topaza, Wlk. 1864.
|| Birthana, Wlk. 1864.
|| Alicadra, Wlk. 1865.
|| Vinzela, Wlk. 1865.
|| Jobula, Wlk. 1866.
|| Methypsa, Butler 1875.
|| Bursadella, Snellen 1880.
|| Thylacopleura, Meyr. 1886.
|| Davendra, Moore 1887.
|| Callartona, Hampson 1893.
|| Scaptesylix, Hampson 1895.
|| Sthenistis, Hampson 1896.
|| Hyperperissa, Walsingham 1900.
|| Pseudotortrix, Turner 1900.

Gel. Inapha, Walker 1861. (THUBANA, Wlk.).
Cat. XXX 999 : type [*bisignatella*, Wlk. =] *lampronialis*, Wlk. [Sarawak].

Incurv. INCURVARIA, Haworth 1828.
Lep. Brit., p. 559 : type *muscalella*, Fb. [Europe].

Tin. Infurcitinea, Spuler 1910. (MEESSIA, Hofmann).
Schmett. Eur. II 461 : type *argentimaculella*, Stainton [Europe].

Oec. Inga, Busck 1908. (CRYPTOLECHIA, Zeller).
Proc. U. S. Nat. Mus. XXXV 200 : type *sparsiciliella*, Clemens [N. America].

Gel. INOTICA, Meyrick 1913.
Exot. Micr. I 65-66 : type *gaesata*, M. [Asia Minor].

Gel. IOCHARES, Meyrick 1921.
Ann. Transv. Mus. VIII 81 : type *festa*, M. [Transvaal].

Eucosm. Ioplocama, Clemens 1860. (EUCOSMA, Hb.).
Proc. Acad. Nat. Sci. Philad. XII 360 : type *formosana*, Clemens [N. America].

Oec. IOPTERA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 344 : type *aristogona*, M. [Australia].
Ioptera, Mey., P. Linn. Soc. N. S. W. VII 424 (1883) [Invalid : no associated species].

Tin. IPHIERGA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 517 : type *stasiodes*, M. [Queensland].

Tin. IPPA, Walker 1864.
Cat. XXIX 781 : type *vacivella*, Wlk. [N. India].
|| Olycha, Snellen 1903.

Diplos. IRENICODES, Meyrick 1919.
Tr. N. Z. Inst. LI 352 : type *eurychora*, M. [New Zealand].

Glyph. IRIANASSA, Meyrick 1905.
B. J. XVI 609 : type *sapphiropa*, M. [Ceylon].

Glyph. IRIDOSTOMA, Meyrick 1909.
B. J. XIX 425 : type *ichthyopa*, M. [Ceylon].

Eupist. IRIOTHYRSA, Meyrick 1908.
P. Z. S. 1908, 736 : type *melanogma*, M. (S. Africa).
? || Amblyxena, Meyr. 1914.

Gel. ISCHNODORIS, Meyrick 1911.
B. J. XX 726 : type *sigalota*, M. [Ceylon].

Eupist. ISCHNOPHANES, Meyrick 1891.
E. M. M. XXVII 60 : type *monocentra*, M. [Algeria].

Eupist. ISCHNOPSIS, Walsingham 1881.
T. E. S. 1881, 236 : type *angustella*, Wlsm. [Natal].

Tin. Ischnoscia, Meyrick 1895. (GUENEA, Millière).
Handb., p. 783 : type [*borreonella*, Mill. =] *subtilella*, Fuchs [Europe].

Lyonet. ? ISCHNURIDIA, Sauber 1901.
Semper's Schmett. Philipp. II 704 : type ......

Gel. ISEMBOLA, Meyrick 1926.
Exot. Micr. III 271 : type *diasticta*, M. [Ecuador].

Ypon. Ismene, Stephens 1834. (ARGYRESTHIA, Hb.).
Ill. Brit. Ent., Haust. IV 247-248 : type [*nitidella*, Fb. =] *pruniella*, Steph. [Europe].

Gel. Isochasta, Meyrick 1886. (ARISTOTELIA, Hb.).
Tr. N. Z. Inst. XVIII 163-164 : type *paradesma*, M. [New Zealand].

Tortr. ISOCHORISTA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 421 : type *ranulana*, M. (E. Australia).

Incurv. ISOCORYPHA, Dietz 1905.
Tr. Am. E. S. XXXI 42-43, t. 5 f. 5 : type *mediostriatella*, Clemens [U. S. America]

Oec. ISOCRITA, Meyrick 1909.
Ann. S. Afr. Mus. V 372 : type *stolarcha*, M. [S. Africa].

Coprom. ISONOMEUTIS, Meyrick 1887.
Tr. N. Z. Inst. XX 75 : type *amauropa*, M. [New Zealand].

Gel. ISOPHRICTIS, Meyrick 1917.
E. M. M. LIII 113 : type [*tanacetella*, Schr. =] *striatella*, Hb. [Europe].

Schreck. ISORRHOA, Meyrick 1913.
Exot. Micr I 79 : type *antimetra*, M. [India].

Tortr. ISOTRIAS, Meyrick 1895.
Handb., p. 542, fig. : type [*rectifasciana*, Hw. =] *hybridana*, Wilk. nec Hb. [Europe].

Tin. ISOZYGA, Meyrick 1921.
Ann. Transv. Mus. VIII 130 : type *phasganopa*, M. [Port. E. Africa].

Gel. ISTRIANIS, Meyrick 1918.
Exot. Micr. II 130 : type *crauropa*, M. [India].

Cosm. Ithome, Chambers 1875. (MOMPHA, Hb.).
Canad. Ent. VII 93-94 : type *unimaculella*, Chambers [N. America].

Ypon. ITHUTOMUS, Butler 1883.
T. E. S. 1883, 84 : type *formosus*, Butler [Chile].

Crypt. IULACTIS, Meyrick 1918.
Exot Micr. II 145 : type *semifusca*, M. [Queensland].

Gel. IULOTA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 283 : type *ithyxyla*, M. [W. Australia].

Oec. IZATHA, Walker 1864.
Cat. XXIX 786-787 : type *attactella*, Wlk. [New Zealand].
|| Semiocosma, Meyr. 1884.
|| Zirosaris, Meyr. 1910.

J

Glyph. Jobula. Walker 1866. (IMMA, Wlk.).
Cat. XXXV 1888 : type *semilinea*, Wlk. [Sula].

Glyph. Jonaca, Walker 1863. (SAGALASSA, Wlk.).
Cat. XXVIII 457 : type [*valida*, Wlk. =] *compulsana*, Wlk. [Brazil].

? JOONGOORA, Lucas 1901.
Proc. R. Soc. Queensl. XVI 91 : type *tricollata*, Lucas [Queensland].
[Description not accessible ; perhaps not a Micro.].

K

Cosm. ? KAKIVORIA, Nagano 1916.
Konch. Sek. Gifu. XX 136-138 : type *flavofasciata*, Nagano [Japan].
[*Note*.—Recorded in *Zoological Record* under "Bombyces," but is, I believe, a Cosmopterygid.]

Incurv. ? KEARFOTTIA, Fernald 1904.
Canad. Entom. XXXVI 130 : type *albifasciella*, Fernald [U. S. America].

Eucosm. Kennelia, Rebel 1901. (ARGYROPLOCE, Hb.).
Cat. Lep. Pal. II 263 : type *xylinana*, Kennel [Amur].

Ypon. Kessleria, Nowicki 1864. (ZELLERIA, Stainton).
Micr. spec. nov., p. 13 : type *zimmermani*, Now. [Alps].

Aluc. KOREMAGUIA, Hampson 1891.
Ill. Het. VIII 142 : type [*alticola*, Feld. =] *aurantidactyla*, Hmp. [India].

Eucosm. KUNDRYA, Heinrich 1923.
U. S. Nat. Mus. Bull. 123, p. 192, ff. 8, 8^a, 34, 415 : type *finitimana*, Heinrich [Atlantic States].

L

Cosm. LABDIA, Walker 1864.
Cat. XXIX 823 : type *deliciosella*, Wlk. [Australia].

Gel. LACHNOSTOLA, Meyrick 1918.
Ann. Transv. Mus. VI 22 : type *amphizeucta*, M. [Natal].

Gel. LACISTODES, Meyrick 1921.
Ann. Transv. Mus. VIII 92 : type *tauropis*, M. [Rhodesia].

Oec. LACTISTICA, Meyrick 1907.
B. J. XVII 741 : type *geranodes*, M. [Assam].

Ypon. LACTURA, Walker 1854.
Cat. II 485 : type *dives*, Wlk. [N. Queensland].
|| Dianasa, Wlk. 1854.
|| Mieza, Wlk. 1854.
|| Sarbena, Wlk. 1864 (*praeocc.*).
|| Themiscyra, Wlk. 1864.
|| Cyptasia, Wlk. 1866.
|| Buxeta, Wlk. 1866.
|| Enaemia, Zeller 1872.
|| Pseudotalara, Druce 1885.
|| Pseudocaprima, Wlsm. 1900.
|| Epidictica, Turner 1903.
|| Hedycharis, Turner 1903.
|| Eriopyrrha, Meyr. 1913.

Cosm. LALLIA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 351 : type *apicinotella*, Chrét. [Algeria].

Schreck. LAMACHAERA, Meyrick 1915.
Exot. Micr. I 338 : type *cyanacma*, M. [Philippines].

Schreck. LAMPROLOPHUS, Busck 1901.
Jl. N. York Ent. Soc. VIII 241, t. 9 f. 5 : type *lithella*, Busck [Florida].
|| Embola, Wlsm. 1909.

Incurv. LAMPRONIA, Stephens 1835.
Ill. Brit. Ent., Haust. IV 356 : type *luzella*, Hb. [Europe].
Lampronia, Steph., Cat. Brit. Ins. II 226 (1829) (*non-descr.*).
? SETELLA, Schrank 1802 = (q.v.).

Oec. Lampros, Treitschke 1833. (HARPELLA, Schrank).
Schmett. Eur. IX, ii, 57 : type *forficella*, Scop. = *majorella*, Schiff [Europe].

Tin. Lamprosetia, Stainton 1854. (TEICHOBIA, H. S.).
Brit. Lep. Tin., p. 39, t. 2 f. 2c : type *verhuellella*, Heyden [Europe].

Gel. Lamprotes, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschm. II, i, 309 : type *atrella*, Hw. [Europe].

Schreck. LAMPROTEUCHA, Meyrick 1922.
Exot. Micr. II 586 : type *cassiteris*, M. [India].

Heliozel. LAMPROZELA, Meyrick 1916.
Exot. Micr. II 9 : type *praefulgens*, M. [Brit. Guiana].

Glyph LAMPRYSTICA, Meyrick 1914.
Ent. Mitteil., Suppl. III, p. 58 : type *purpurata*, M. [Formosa].

Ypon. LAMYRISTIS, Meyrick 1911.
B. J. XXI 131 : type *leucopselia*, M. [Ceylon].

Tortr. LAMYRODES, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 182 : type *phileris*, M. [S Australia].

Oec. LANGASTIS, Meyrick 1914.
Exot. Micr. I 267 : type *ochlica*, M. [Ceylon].

Gel. LARCOPHORA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 241 : type *sophronistis*, M. [Kanara].

Aeg. Larunda, Henry -Edwards 1881 (*praeocc.*). (GAEA, Beut.).
Papilio I 182 : type *solituda*, H.-Edw. [N. America].

Tin. Lasioctena, Meyrick 1887. (MELASINA, Bdv.).
T. E. S. 1887, 278-279 : type *sisyraea*, M. [S. Africa].

Glyph. LASIODICTIS, Meyrick 1912.
Exot. Micr. I 41 : type *melistoma*, M. [India].

Oec. LASIOMACTRA, Meyrick 1921.
Ann. Transv. Mus VIII 102 : type *acharista*, M. [E. Africa].

Phal. LASIOTHYRIS, Meyrick 1917.
T. E. S. 1917, 4 : type *limatula*, M. [Ecuador].

Eucosm. Laspeyresia, Hubner 1826. (ENARMONIA, Hb.).
Verz., p. 381 : type *corollana*, Hb. [Europe].

Gel. Lata, Strand 1910. (TECIA, Strand).
Berl. ent. Zeits. LV 167-168 : type *kiefferi*, Strand [Argentina].

Oec. LATHICROSSA, Meyrick 1884.
Tr. N. Z. Inst. XVI 26 : type *leucocentra*, M. [New Zealand].

Gel. Lathontogenus, Walsingham 1897. (BRACHYACMA, Meyr.).
P. Z. S. 1897, 87-88 : type [*palpigera*, Wlsm. =] *adustipennis*, Wlsm.
[W. Indies, S. Africa, India, etc.]

Eucosm. LATHRONYMPHA, Meyrick 1926.
Entom. LIX 27 : type *hypericana*, Hb. [Europe ; W. & N. Asia].

Oec. LATOMETUS, Butler 1882.
A. M. N. H. (5) IX 101 : type *pilipes*, Butler [S. E. Australia].
|| Antidica, Meyr. 1883.

Gel. LATROLOGA, Meyrick 1918.
Exot. Micr. II 132 : type *aoropis*, M. [Ceylon].

Tin. LATYPICA, Meyrick 1916.
Exot. Micr. I 606 . type *albofasciella*, Stainton [India].

Cosm. Laverna, Curtis, 1839. (MOMPHA, Hb.).
Brit. Entom. XVI, expl. t. 735 : type *ochraceella*, Curtis [Europe].

Oec. LAXONOMA, Meyrick 1914.
Exot. Micr. I 240 : type *leptostola*, M. [E. Australia].

Gel. LECITHOCERA, Herrich-Schäffer 1853.
Schmett. Eur. V 45, t. 12 ff. 10, 11 : type *luticornella*, Zeller [Europe].
|| Tiriza, Wlk. 1864.
|| Titana, Wlk. 1864.
|| Tirasia, Wlk. 1864 (*praeocc.*).
|| Patouissa, Wlk. 1864.
? || Andusia, Wlk. 1866.
|| Siovata, Wlk. 1866.
|| Macrotona, Meyr. 1901.

Lyonet. Leioprora, Turner 1900. (LYONETIA, Hb.).
Tr. R. Soc. S. Austr. XXIV 22 : type *ascepta*, Turner [Queensland].

Aluc. Leioptilus, Wallengren 1859. (OIDAEMATOPHORUS, Wlgn.).
K. Svensk. Vet. Akad. III, No. 7, p. 21 (? 1862) : type *scarodactylus* Hb. [Europe].

Oec. LEISTARCHA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 325-326 : type [*scitissimella*, Wlk. =] *iobola*, M. [N. S. Wales].
Leistarcha, Mey, P. Linn. Soc. N. S. W. VII 422 (1883) [Invalid ; no associated species].
|| Tigava, Wlk. 1864 (*praeocc.*).

Crypt. LEISTOGENES, Meyrick 1927.
Exot. Micr. III 363 : type *rebellis*, M. [Peru].

Oec. LEISTOMORPHA, Meyrick 1884.
P. Linn. Soc. N. S. W. VIII 509-510 : type *brontoscopa*, M. [Australia].
Leistomorpha, Mey., P. Linn. Soc. N. S. W. VII 422 (1883) (Invalid ; no associated species).

Oec. Lemmatophila, Treitschke 1832. (DIURNEA, Hb.).
Schmett. Eur. IX, i. 25 : type *fagella*, Fb. [Europe].

Oec. Lemmatophila, Duponchel 1838 (nec Tr.). (CHEIMOPHILA, Hb.).
Ann. S. E. Fr. VII 131 : type *phryganella*, Schr. [Europe].

Aeg. LENYRA, Walker 1856.
Cat. VIII 71 : type *astaroth*, Westwood [India].

Gel. LEOBATUS, Walsingham 1904.
E. M. M. XL 220-221 : type *fagoniae*, Wlsm. [Algeria).

Tortr. LEONTOCHROMA, Walsingham 1900.
A. M. N. H. (7) V 466 : type *aurantiaca*, Wlsm. [India].

Tin. Lepidocera, Curtis 1831. (OCHSENHEIMERIA, Hb.).
Brit. Entom., VIII expl. t. 344 : type *birdella*, Curtis [Europe].

Aeg. LEPIDOPODA, Hampson 1900.
B. J. XIII 43 : type *heterogyna*, Hmp. [Madras].

Tin. LEPIDOSCIA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 506 : type *sciodesma*, M. [Tasmania].

Glyph. Lepidotarphius, Pryer 1877. (GLYPHIPTERIX, Hb.).
Cistula Entom. II 235 : type [*perornatella*, Wlk. =] *splendens*, Pryer [China].

Oec. LEPIDOTARSA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 446 : type *chrysopoca*, M. [S. E. Australia].
Lepidotarsa, Mey., P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid ; no associated species].

Oec. Lepidozancla, Turner 1916. (MACHIMIA, Clemens).
P. Linn. Soc. N. S. W. XLI 375 : type *zatrephes*, Turner [Queensland].

Plut. LEPOCNEMIS, Meyrick 1913.
Ann. Trasv. Mus. III 325 : type *bascanopa*, M. [Transvaal].

Aeg. Leptægeria, Le Cerf 1917. (CONOPIA, Hb.).
Obth., Et. Lep. comp. XIV 281 : type *flavocastanea*, Le Cerf [Bolivia].
Leptaegeria, Le Cerf, Obth. Et. Lep. comp. XII 11 (1916) (*non-descr.*).

Eucosm. Leptarthra, Lower 1902. (ENARMONIA, Hb.).
Tr. R. Soc. S. Austr. XXVI 253 : type *aulacodes*, Lower [Queensland].

Eucosm. Leptia, Guenée (*non-descr.*). (BACTRA, Stephens).
Ann. S. E. Fr. (2) III 169 (1845) (*nom. nud.*) : type *lanceolana*. Hb. [Europe].

Crypt. LEPTOBELISTIS, Turner 1902.
Tr. R. Soc. S. Austr. XXVI 198 : type *asemanta*, Turner [Queensland].

Tin. LEPTOCHERSA, Meyrick 1919.
Exot. Micr. II 272 : type *diarthra*, M. [Brit. Guiana].

Oec. LEPTOCOPA, Meyrick 1918.
Exot. Micr. II 220-221 : type *notoplecta*, M. [Queensland].

Oec. LEPTOCROCA, Meyrick 1886.
P. Linn. Soc. N. S. W. X 775 : type *sanguinolenta*, M. [E. Australia].
Leptocroca, Meyr., P. Linn. Soc. N. S. W. VII 425 (1883). [Invalid; no associated species].
|| Mimobrachyoma, Lower 1902.

Auc. LEPTODEUTEROCOPUS, Fletcher 1910.
T. E. S. 1910. 138, f. 7 : type *citrogaster*, Fletcher [Amboyna].

Gel. LEPTOGENEIA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 412-413 : type *bicristata*, M. [Australia].

Tortr. Leptogramma, Curtis 1831. (PERONEA, Curtis).
Guide, p. 173 [? descr.] : type *literana*, Linn. [Europe].
Leptogramma, Curtis, Brit. Entom. X 440 (1833) (charact.).
Leptogramma, Stephens, Cat. Brit. Ins. II 187 (1829) (*non-descr.*).

Tin. LEPTONOMA, Meyrick 1916.
Exot. Micr. I 607 : type *citrozona*, M. [Nyasaland].

Tortr. Leptoris, Clemens 1865. (SPARGANOTHIS, Hb.).
Proc. E. S. Philad V 139-140 : type [*xanthoides*, Wlk. =] *breviornatana*, Clemens [N. America].

Oec. Leptosaces, Meyrick 1888. (CRYPTOLECHIA, Zeller).
Tr. N. Z. Inst. XX 77-78 : type *callixyla*, M. [New Zealand].

Tin. LEPTOZANCLA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. pp. 107-108 : type *talaroscia*, M. [Br. E. Africa].

Cosm. LEPTOZESTIS, Meyrick 1924.
Exot. Micr. III 91 : type *parascia*, M. [W. Australia].

Tin. LEPYROTICA, Meyrick 1921.
Zool. Meded. VI 199 : type *scardamyctis*, M. [Leeward Islands].

Oec. Lesiandra, Meyrick 1914. (FUCHSIA, Spuler).
Exot. Micr. I 231-232 : type *luteella*, Heinemann [Austria].

Crypt. LETOGENES, Meyrick 1921.
Zool. Meded. VI 173 : type *auguralis*, M. [Java].

Lith. LEUCANTHIZA, Clemens 1859.
Proc. Acad. Nat. Sci. Philad. 1859, p. 327 : type *amphicarpaeifoliella*, Clemens [N. Atlantic States].

Geol. LEUCE, Chambers 1875.
Canad. Entom. VII 51 : type *fuscocristatella*, Chambers [Texas].
|| Naera, Chambers 1875 (*praeocc.*).

Tin. LEUCOMELE, Dietz 1905.
Tr. Am. E. S. XXXI 89-90, t. 6 f. 7 : type *miriamella*, Dietz [U. S. America].

Lyon. LEUCOPHASMA, Walsingham 1897.
P. Z. S. 1897, 155 : type *phantasmella*, Wlsm. [W. Indies].

Cosm. Leucophryne, Chambers 1875. (MOMPHA. Hb.).
Canad. Ent. VII 210-211 : type *tricristatella*, Chamb. = *grandisella*, Chambers [Canada].

Lyon. LEUCOPTERA, Hubner 1826.
Verz., p. 426 : type *spartifoliella*, Hb. [Europe].
|| Cemiostoma, Zeller 1848.

Lith. Leucospilapteryx, Spuler 1910. (ACROCERCOPS, Wlgn.).
Schmett. Eur. II 408, f. 159 : type *omissella*, Stainton [Europe].

Gel. LEURONOMA, Meyrick 1918.
Ann. Transv. Mus. VI 16 : type *chlorotoma*, M. [Transvaal].

Plut. LEUROPTILA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 172 : type *tephropasta*, Turner [Queensland].

Schreck. LEUROSCELIS, Turner 1927.
Proc. R. Soc. Tasmania 1926, p. 155 : type *coracopis*, Turner [Tasmania].

Aeg. Leuthneria, dalla Torre (*non-descr.*).
Cat. Lep. Aeg., p. 149 (1926) : type *ruficincta*, Feld. [S. America],
[*Note.*– *Leuthneria* was proposed to replace *Eublepharis*, Felder (nec Gray 1827), but the genus remains *non-descript* and hence invalid.]

Gel. LEXIARCHA, Meyrick 1916.
Exot. Micr. I 590 : type *galactopa*, M. [N. Australia].

Crypt. Lichenaula, Meyrick 1890. (PHTHONERODES, Meyr.).
Tr. R. Soc. S. Austr. XIII 46 : type [*undulatella*, Wlk. =] *lichenea*. M. [E. Australia].

Schreck. LICMOCERA, Walsingham 1891.
T. E. S. 1891, 128 : type *lyonetiella*, Wlsm. [W. Africa].

Gel. LIMENARCHIS, Meyrick 1926.
Exot. Micr. III 288 : type *zonodeta*, M. [New Ireland].

Eucosm. Limma, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz., pp. 380-381 : type *inundana*, Schiff. [Europe].

Cosm. LIMNAECIA, Stainton 1851.
Suppl. Cat. Brit. Tin., p. 4 : type *phragmitella*, Stainton [Europe ; N. & S. Africa ; E. Australia ; New Zealand].
|| Anybia, Stainton 1854.
|| Atremaea, Staudinger 1871.
|| Ptilochares, Meyr. 1886.
|| Limnœcia, Meyr. 1888 (*emend.*).
|| Opsizyga Lo e. 1903.
|| Erechthiodes, Meyr. 1914.
|| Callı estıs, Meyr. 1917.
|| Thalerostoma, Meyr. 1917.

Tin. LINDERA, Blanchard 1852.
Faun. Chil. VII 1 5 : type *tessellatella* Blanchard [America ; India ; Australia. etc.]
|| Safra, Wlk. 1864 (*praeocc.*).
|| Chrestotes, Butler 1881 (*praeocc.*).
|| Paraneura, Dietz 1905.

Crypt. LINOCLOSTIS, Meyrick 1908.
B. J. XVIII 626 : type *gonatias*, M. [Khasis].

Oec. Linosticha, Meyrick 1883. (EULECHRIA, Meyr.).
P. Linn. Soc. N. S. W. VIII 338 (1883) : type *scythropa*, M. [N. S. Wales].
Linosticha, Meyr, P. Linn Soc. N. S. W. VII 424 (1883) [Invalid ; no associated species].

Gel. LIOCLEPTA, Meyrick 1922.
T. E. S. 1922, 115-116 : type *complanata*, M. [Peru].

Lith. LIOCROBYLA, Meyrick 1916.
Exot. Micr. II 5 : type *paraschista*, M. [India ; Fiji].

Oec. Liozancla, Turner 1919. (SCALIDEUTIS, Meyr.).
Proc. R. Soc. Queensl. XXXI 127 : type [*cocytias*, M. =] *holophaea*, Turner [S. E. Australia].

Crypt. LIPARISTIS, Meyrick 1915.
Exot. Micr. I 376 : type *lioxera*, M. [N. S. Wales].

Gel. Lipatia, Busck 1910. (BRACHYACMA, Meyr.).
Bull. Trinidad Dept. Agric. IX, No. 66, p. 243, fig. : type [*papigera*, Wlsm. =] *crotalariella*, Busck [Trinidad ; S. Africa ; India].

Tin. Lipomerinx, Walsingham 1914. (TRITHAMNORA, Meyr.).
Biol. Centr. Am., Het. IV 368-369 : type *prismatica*, Wlsm. [C. & S. America].

Eucosm. Lipoptycha, Lederer 1859. (HEMIMENE, Hb.).
Wien. Ent. Mon. III 370 : type *plumbana*, Scop. [Europe].

Eucosm. Lipsotelus, Walsingham 1900. (ARGYROPLOCE, Hb.).
Cat. Het. Mus. Oxon. II 569-570 : type *lichenoides*, Wlsm. [Mergui].

Schreck. LISSOCARENA, Turner 1923.
Proc. R. Soc. Victoria XXXVI 80-81 : type *semicuprea*, Turner [Queensland].

Ypon. LISSOCHROA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 170-171 : type *argostola*, Turner [Queensland ; N. S. Wales].

Gel. Lita, Treitschke 1833. (GELECHIA, Hb.).
Schmett. Eur. IX, ii, 76 : type [*virgella*, Thnb. =] *zebrella*, Tr. [Europe to E. Siberia ; N. America].

Ypon. LITANEUTIS, Meyrick 1913.
Exot. Micr. I 143 : type *sacrifica*, M. [Queensland ; Assam].

Schreck. Lithariapteryx, Chambers 1876. (CHRYSOESTHIA, Hb.).
Canad. Ent. VIII 217 : type *abroniaeella*, Chambers [N. America].

Lith. LITHOCOLLETIS, Hübner 1826.
Verz., p. 423 : type *alnifoliella*, Hb. [Europe].
|| Eucestis, Hb. 1826.
|| Hirsuta, Bruand 1847 (*non-descr.*).
|| Cameraria, Chapman 1902.
|| Porphyrosela, Braun 1908.
|| Phyllonorycter, Ely 1918 (Hb. 1806 : *nom. nud.*).(Phyllorycter, Wlsm. 1908 : *non-descr.*).
|| Lithocolletes, Dyar 1903 (*lapsus*).

Eucosm. Lithographia, Stainton 1858. (EUCOSMA, Hb.).
Manual II 206-207 : type *nisella*, Clerck [Europe].
Lithographia, Steph., List Brit. Anim. B. M. X 32 (1852) (*non-descr.*).

Oec. Litoides, Bruand 1856. (BORKHAUSENIA, Hb.).
Mém. Soc. Emulation Doubs X 109-110 (? descr.) : type [*pseudospretella*, Stainton =] *punctipinguinella*, Brd. [Europe, etc.].

Eucosm. LOBESIA, Stainton 1859.
Manual II 266 : type [*permixtana*, Hb. =] *reliquana*, Hb. [Europe to N. Persia].
Lobesia, Gn., Ann. S. E. Fr. (2) III 297 (1845) (*non-descr.*).
Lobesia, Steph., List Brit. Anim. B. M. X 76 (1852) (*non-descr.*).
|| Lomaschiza, Lower 1901.

Crypt. LOBOPTILA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 159: type *leurodes*, Turner [N. Queensland].

Gel. LOCHARCHA, Meyrick 1923.
Exot. Micr. III 18: type *emicans*, M. [Peru].

Oec. LOCHEUTIS, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 341: type *philochora*, M. [Tasmania]

Gel. LOGISIS, Walsingham 1909.
Biol. Centr. Am., Het. IV 20-21, f. 6: type *achroea*, Wlsm. [Costa Rica].

Eucosm. Lomaschiza, Lower 1901. (LOBESIA, Stainton).
Tr. R. Soc. S. Anstr. XXV 68: type *physophora*, Lower [Queensland].

Tortr. Lopas, Hübner 1826. (PERONEA, Curtis).
Verz., p. 384: type *cristana*, Fb. [Europe].

Crypt. LOPHOBELA, Turner 1917.
Proc. R. Soc. Queensl. XXIX 96: type *sinuosa*, Turner [N. Queensland].

Aeg. LOPHOCEPS, Hampson 1919.
Novit. Zool. XXVI 69: type *abdominalis*, Hmp. [E. Africa].

Aeg. LOPHOCNEMA, Turner 1917.
Proc. R. Soc. Queensl. XXIX 78: type *eusphyra*, Turner [N. Queensland].

Tortr. Lophoderus, Stephens 1834. (EULIA, Hb.).
Ill. Brit. Ent., Haust. IV 143-144: type *ministrana*, Linn. [Europe].
Lophoderus, Steph., Cat. Brit. Ins. II 184 (1829) (*non-descr.*).

Eperm. Lophonotus, Stephens 1834. (EPERMENIA, Hb.).
Ill. Brit. Ent., Haust. IV 218: type [*chaerophyllella*, Gœze =] *fasciculellus*, Stephens [Europe].
Lophonotus, Steph., Cat. Brit. Ins. II 198 (1829) (*non-descr.*).

Oec. LOPHOPEPLA, Turner 1896.
Tr. R. Soc. S. Austr. XX 10: type *igniferella*, Wlk. [E. Australia].

Cosm. Lophoptilus, Sircom 1848. (MOMPHA, Hb.).
Zoologist VI, 2037: type [*miscella*, Schiff. =] *staintoni*, Sircom [Europe].

Ypon. LOTISMA, Busck 1909.
Proc. E. S. Wash. XI 98: type *trigonana*, Wlsm. [N. America].

Eucosm. Loxoterma, Busck 1906. (ARGYROPLOCE, Hb.).
Entl. News XVII 305: type *latifasciana*, Hw. [Europe].

Crypt. LOXOTOMA, Zeller 1854.
Linn. Ent. IX 354, 383-384 : type *elegans*, Zeller [Colombia].

Glyph. LOXOTROCHIS, Meyrick 1906.
T. E. S. 1906. 205 : type *sepias*, M. [Brazil].

Phal. LOZOPERA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 187: type *francillana*, Fb. [Europe].
Lozopera, Steph., Cat. Brit. Ins. II 191 (1829) (*non-descr.*).

Lyon. Lozostoma, Stainton 1859. (OPOGONA, Zeller).
T. E. S. (n.s.) V 129 : type *flavofasciata*, Stainton [India].

Tortr. Lozotaenia, Stephens 1834. (TORTRIX, Linn.).
Ill. Brit. Ent., Haust. IV 69-70 : type *forsterana*, Fb. [Europe].
Lozotaenia, Steph., Cat. Brit. Ins. II 169 (1829) (*non-descr.*).
Loxotaenia, Hein., Kleinschmett. Deuts. I, i. 39 (1863) (*emend.*).

Tin. LUFFIA, Tutt 1900.
Brit. Lep. II 232-234 : type *lapidella*, Goeze [Europe].
Luffia, Tutt, Ent. Rec. XI 191 (1899) (*non-descr.*).
|| Bacotia, Tutt 1900.

Oec. Lupercalia, Busck 1912. (FILINOTA, Busck).
Smiths. Misc. Coll. LIX, No. 4, Pubn. 2079, pp. 6-7 : type *ignita*. Busck [Panama].

Crypt. LYCHNOCRATES, Meyrick 1926.
Exot. Micr. III 226-227 : type *leucocapna*, M. [Colombia].

Ypon. Lycophantis, Meyrick 1914. (ZELLERIA, Stainton).
B. J. XXIII 122-123 : type *chalcoleuca*, M. [Assam].

Glyph. LYGRONOMA, Meyrick 1913.
Exot. Micr. I 100 : type *sporimaea*, M. [S. America].

Lyon. LYONETIA, Hübner 1826.
Verz., p. 423 : type *clerkella*, Linn. [Europe ; Kashmir].
? || Argyromis, Stephens 1829 (*non-descr.*).
|| Argyromiges, Curtis 1829.
|| Gracillaroides, Bruand 1847 (*non-descr.*).
|| No turno, Gistel 1848 (*non-descr.*).
|| Eulyonetia, Chambers 1880.
|| Stegommata, Meyr. 1880.
|| Compsoschema, Wlsm. 1897.
|| Leioprora, Turner 1900.

Ypon. LYPUSA, Zeller 1852.
Linn. Ent. VII 331, 333-334 : type *maurella*, Schiff. [C. & S. Europe].

Oec. LYSIGRAPHA, Meyrick 1914.
Exot. Micr. I 184-185 : type *capsaria*, M. [Brit. Guiana].

Gel. LYSIPATHA, Meyrick 1926.
Exot. Micr. III 289 : type *cyanoschista*, M. [New Guinea].

Tin. LYSIPHRAGMA, Meyrick 1888.
Tr. N. Z. Inst. XX 104-105 : type *mixochlora*, M. [New Zealand].

Tin. LYSITONA, Meyrick 1918.
Ann. Transv. Mus. VI-57 : type *euryacta*, M. [S. E. Africa].

Tin. LYTROPHILA, Meyrick 1913.
Ann. Transv. Mus. III 319 : type *panarga*, M. (Transvaal).

M

Ypon. MACARANGELA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 587 : type *leucochrysa*, M. [N. S. Wales].

Lith. Macarostola, Meyrick 1907. (PARECTOPA, Clemens).
P. Linn. Soc. N. S. W. XXXII 62 : type *formosa*, Stainton [E. Australia].

Oec. MACHAERITIS, Meyrick 1886.
P. Linn. Soc. N. S. W. X 766-767 : type *aegrella*, M. (Australia).
Machaeritis, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883) [Invalid ; no associated species].

Tin. MACHAEROPTERIS, Walsingham 1887.
Moore's Lep. Ceylon III 502 : type [*phenax*, M.=] *receptella*, Wlsm nec Wlk. [Ceylon].

Oec. MACHETIS, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 331 : type *aphrobola*, M. (E. Australia).
Machetis, Meyr., P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid ; no associated species].

Oec. MACHIMIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. 1860, p. 211 : type *tentoriferella* Clem. [Atlantic States].
|| Garrha, Wlk. 1866.
|| Hoplitica, Meyr. 1883.
|| Hoplomorpha, Turner 1916.
|| Lepidozancla, Turner 1916.

Lyon. MACHIMOSTOLA, Meyrick 1928.
Exot. Micr. III 399 : type *commatias*, M. [Ceylon].

Glyph. MACHLOTICA, Meyrick 1909.
T. E. S. 1909. 36-37 : type *chrysodeta*, M. [S. America].
|| Abrenthia, Busck 1915.

Gel. MACHLOTRICHA, Meyrick 1912.
Ann. S. Afr. Mus. X 61-62 : type *caeca*, M. [Zululand].

Tin. MACRAEOLA, Meyrick 1892.
P. Linn. Soc. N. S. W. VII 554-555 : type *linobola*, M. [N. S. Wales].

Orn. Macrembola, Meyrick 1909. (MICROSCHISMUS, Fletcher).
Ann. Transv. Mus. II 5 : type *fortis*, Wlsm. [S. Africa].

Gel. MACRENCHES, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 306 : type *eurybatis*, M. [Australia].

Gel. Macrernis, Meyrick 1887. (FRISILIA, Wlk.).
T. E. S. 1887. 275 : type *heliapta*, M. [Ceylon].

Oec. MACROBATHRA, Meyrick 1886.
P. Linn. Soc. N. S. W. X 799-800 : type *chrysotoxa*, M. [E. Australia].
Macrobathra, Meyr., P. Linn. Soc. N. S. W. VII 425 (1883) [Invalid ; no associated species].

Gel. MACROCERAS, Staudinger 1876.
Stett. ent. Ztg. XXXVII 150 : type *oecophila* Stdgr. [Tropics & Subtropics].
|| Oecia, Wlsm. 1897.

Oec. Macrochila, Stephens 1834. (PLEUROTA, Hb.).
Ill. Brit. Ent., Haust. IV 223 : type *bicostella*, Linn. [Europe].
Macrochila, Steph., Cat. Brit. Ins. II 199 (1829) (*non-descr.*).

Oec. Macronemata, Meyrick 1883. (EULECHRIA, Meyr.).
P. Linn. Soc. N. S. W. VIII 345-346 : type *elaphia*, M. [Australia].
Macronemata, Meyr., P. Linn. Soc. N. S. W. VII-424 (1883) [Invalid ; no associated species].

Oec. MACROSACES, Meyrick 1905.
B. J. XVI 604 : type *thermopa*, M. [Ceylon].

Aeg. MACROSCELESIA, Hampson 1919.
Novit. Zool. XXVI 84 : type *longipes*, Moore. [C. China].

Aeg. Macrotarsipodes, Le Cerf 1917. (TIPULAMIMA, Holland).
Obth., Et. Lep. Comp. XIV 338 : type *tricincta*, Le Cerf. [S. Africa].
Macrotarsipodes, Le Cerf., Obth. Et. Lep. Comp. XII 13 (1916) (*non-descr.*).

Aeg. MACROTARSIPUS, Hampson 1893.
Faun. India, Moths I 194 : type *albipunctatus*, Hmp. (India).

Aluc. MACROTINACTIS, Meyrick 1912.
Ann. S. Afr. Mus. X 55 : type *stenodactylus*, Fletcher (Zululand).

Gel. Macrotona, Meyrick 1904. (LECITHOCERA, H. S.).
P. Linn. Soc. N. S. W. XXIX 405-406 : type *sobria*, M. (N. S. Wales).

Gel. Macrozancla, Turner 1919. (DICHOMERIS, Hb.).
Proc. R. Soc. Queensl. XXXI 130 : type *mendica*, Turner (Australia).

Crypt. MACROZYGONA, Lower 1903.
Tr. R. Soc. S. Austr. XXVII 200 : type *microtoma*, Lower (Victoria).

[MAEPHA, Walker 1864.
Cat. XXX 1013-1014 : type *opulentana*, Wlk. (Brazil).
Note.—Not a Micro. genus.]

Gel. MAGONYMPHA, Meyrick 1916.
Exot. Micr. I. 572 : type *chrysocosma*, M. (S. India).

Oec. Magostolis, Meyrick 1886. (BARANTOLA, Wlk.).
P. Linn. Soc. N. S. W. XI 1039 : type [*pulcherrima*, Wlk =] *uranaula*, Meyr. (Queensland).

Crypt. MALACOGNOSTIS, Meyrick 1926.
Sarawak Mus. Jl. III 160 : type *termatias*, M. (Borneo).

Tin. MALACOGRAPTIS, Meyrick 1922.
Zool. Meded. VII 89 : type *notophanes*, M. (Java).

Gel. MALACOTRICHA, Zeller 1873.
Verh. Z.—b. Ges. Wien XXIII 282 : type [*setosella*, Clem.=] *bilobella*, Zeller (United States).

Tin. MALACYNTIS, Meyrick 1908.
P. Z. S. 1908. 738 : type *stibarodes*, M. [W. Africa].

Aeg. MALGASSESIA, Le Cerf 1922.
Obth. Et. Lep. Comp. XIX 20 : type *rufescens*, Le Cerf. [Madagascar].

Tin. MALLOBATHRA, Meyrick 1888.
Tr. N. Z. Inst. XX 102 : type *crataea*, M. [New Zealand].

Tin. Manchana, Walker 1866. (TIQUADRA, Wlk.).
[Cat. XXXV 1818 : type *avitella*, Wlk. C., S. & Ins. America].

Tin. Manliana, Walker 1864. (TIMAEA, Wlk.).
Cat. XXX 1012 : type [*bivittatella*, Wlk.=] *astrictella*, Wlk. [N. S. Wales].

? MANTALA, Walker 1862.
Jl. Linn. Soc. VI 108-109 : type *tineoides*, Wlk. [Sarawak].

[*Note*. Identity unrecognized; perhaps not a Micro.]

Eucosm. Maorides, Kirkaldy 1910. (EUCOSMA, Hb.).
Canad. Entom. XLII 8 : type *mochlophorana*, M. [New Zealand].

Plut. Mapa, Strand 1911. (YPSOLOPHUS, Fabricius).
Berl. Ent. Zeits. LV 170 : type *cordillerella*, Strand. [Argentina].

Ypon. MAPSIDIUS, Walsingham 1907.
Faun. Hawaii. I 650 : type *auspicata*, Wlsm. [Hawaii].

Aluc. MARASMARCHA, Meyrick 1886.
T. E. S. 1886. 11 : type [*lunaedactyla*, Hw.=] *phaeodactyla*, Hb. [Europe].

Aluc. Mariana, Tutt 1906. (PLATYPTILIA, Hb.).
Brit. Lep. V 160 : type *metzneri*, Zeller. [Europe].

Crypt. Marisba, Walker 1864 (*praeocc.*) (............).
Cat. XXIX 822 : type *basivitta*, Wlk. [Australia].

[*Note*. This genus apparently has no valid name, *Marisba* being preoccupied by Wlk., Cat. XXVII 16-17 (1863)]

Lith. MARMARA, Clemens 1863.
Proc. E. S. Philad. II 6 : type *salictella*, Clemens [N. America].
|| Acsyle, Chambers 1875.

Tin. MARMAROXENA, Meyrick 1927.
Ins. Samoa III 114-115 : type *autochalca*, M. [Samoa].

Crypt. Maroga, Walker 1864 (CRYPTOPHASA, MacLeay).
Cat. XXIX 827 : type [*unipunctana*, Donovan=] *gigantella*, Wlk. [Australia].

Oec. MARTYRINGA, Busck 1902.
Jl. N. Y. Ent. Soc. X 96, t. 12 f. 6 : type *latipennis*, Wlsm. [U. S. America].

Tin. MASTIGOSTOMA, Meyrick 1911.
Tr. Linn. Soc. (2) XIV 301-302 : type *gypsatma*, M. [Seychelles].

Tin. MEA, Busck 1906.
Proc. U. S. Nat. Mus. XXX 735 : type *skinnerella* Dietz [New Jersey].
|| Progona, Dietz 1905 (*praeocc.*).

Tin. MEESSIA, Hofmann 1897.
Iris X 227 : type *vinculella*, H. S. [C. & S. Europe].
|| Infurcitinea, Spuler 1910.

Gel. MEGACRASPEDUS, Zeller 1839.
Isis XXXII 189-190 : type *dolosellus*, Zeller [S. Europe].
|| Neda, Chambers 1874 (*praeocc.*).
|| Pycnobathra, Lower 1901.
|| Autoneda, Busck 1902.
|| Toxoceras, Chrétien 1915.

Tortr. Megalodoris, Meyrick 1912. (ZACORISCA, Meyr.).
Exot. Micr. I. 5 : type *stephanitis*, M. [New Guinea to Philippines].

Aeg. MEGALOSPHECIA, Le Cerf 1917.
Obth., Et. Lep. Comp· XIV 359 : type *gigantipes*, Le Cerf [Cameroons].
Megalosphecia, Le Cerf., Obth. Et. Lep. Comp. XII 13 (1916) (*non-descr.*).

Tin. Meharia, Chrétien 1915. (MELASINA, Bdv.).
Ann. S. E. Fr. LXXXIV 367, f. 11 : type *incurvariella*, Chrét. [Algeria].

Oec. Melanculia, Butler 1883. (CRYPTOLECHIA, Zeller).
T. E. S. 1883. 70 : type *hecate*, Butler [Chile].

Ypon. Melanoleuca, Stephens (*non-descr.*). (ETHMIA, Hb.).
Cat. Brit. Ins. II 202 (1829) : type *pusiella*, Linn. [Europe].

Aeg. MELANOSPHECIA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 245 : type *atra*, Le Cerf [New Guinea].
Melanosphecia, Le Cerf, Obth. Et. Lep. Comp. XII 10 (1916) (*non-descr.*).

Glyph. Melanoxena, Dognin 1910. (SAGALASSA, Wlk.).
Ann. S. E. Belg. LIV 121 : type *falsissima*, Dognin [S. America].

Tin. MELASINA, Boisduval 1840.
Genera Index Method., p. 57 : type *lugubris*, Hb. [C. & S. Europe ; Asia Minor].
|| Coracia, Hb. 1822 (*praeocc.*).
|| Typhonia, Bdv. 1840.
|| Compsoctena, Zeller 1852.
|| Degia, Wlk. 1862.
|| Tissa, Wlk. 1863.
|| Alavona, Wlk. 1863.
|| Torna, Wlk. 1863.
|| Thapava, Wlk. 1864.

|| Galaria, Wlk. 1866.
|| Micrococcus, Wlsm. 1887.
|| Lasioctena, Meyr. 1887.
|| Eccompsoctena, Wlsm. 1897.
|| Mesopolia, Wlsm. 1897.
|| Meharia, Chrétien 1915.
? || Melasiniana, Strand 1914.

Tin Melasiniana, Strand 1914. (? MELASINA, Bdv.).
Arch. Naturg. LXXX. A. 2. pp. 91-93 : type *rustica*, Strand [Cameroons].

Oec. MELEONOMA, Meyrick 1914.
Exot. Micr. I 255 : type *stomota*, Meyr. [India ; Ceylon].

Aeg. MELISOPHISTA, Meyrick 1927.
Exot. Micr. III 371 : type *geraropa*, M. [Br. E. Africa].

Eucosm. Melissopus, Riley 1881. (ENARMONIA, Hb.).
Tr. St. Louis Acad. Sci. IV 322 : type *latiferreana*, Wlsm. [U. S. America].

Plut. MELITONYMPHA, Meyrick 1927.
Exot. Micr. III 360 : type *heteraula*, M. [Texas].

Gel. MELITOXESTIS, Meyrick 1921.
Ann. Transv. Mus. VIII 75-76 : type *centrotypa*, M. [Rhodesia].

Aeg. MELITTIA, Hübner 1820.
Verz., p. 128 : type *bombyliformis*, Cramer [India.].
|| Eumallopoda, Wlgn. 1858.
|| Parasa, Wlgn. 1863 (*praeocc.*).
|| Pansa, Wlgn. 1866.
|| Desmopoda, Felder MS (*non-descr.*).
|| Eublepharis, Felder 1874 (*non-descr.*).
|| Poderis, Boisduval 1875 (*nom. nud.*).
|| Leuthneria, dalla Torre 1926 (*non-descr.*).

Aeg. MELITTINA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 239 : type *nigra*, Le Cerf [Brazil].

Oec. MELOCHRYSIS, Meyrick 1916.
Exot. Micr. I 544 : type *heliaca*, M. [Guinea].

Ypon. MELODRYAS, Meyrick 1910.
T. E. S. 1910. 472 : type *doris*, M. [Solomon Isds.].

Oec. MELOTELES, Meyrick 1920.
Ann. S. Afr. Mus. XVII 289 : type *xanthodoxa*, M. [Bechuanaland].

Aeg. Memythrus, Newman 1832. (PARANTHRENE, Hb.).
Ent. Mag. I 44 : type *tabaniformis*, Rott. [Europe].

Elach. MENDESIA, Joannis 1902.
Bull. S. E. Fr. LXXI 230-231 : type *echiella*, Joannis [Portugal].
|| Triboloneura, Wlsm. 1908.

Cosm. MENEPTILA, Meyrick 1915.
Exot. Micr. I 333 : type *praedonia*, M. [Assam].

Crypt. MENESTA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 213 : type *tortriciformella*, Clem. [Atlantic States].
|| Hyale, Chambers 1880.

Crypt. Menestomorpha, Walsingham 1907. (STENOMA, Zeller).
Proc. U. S. Nat. Mus. XXXIII 214-215 : type *oblongata*, Wlsm. [N. America].

Carp. MERIDARCHIS, Zeller 1867.
Stett. ent. Ztg. XXVIII 407 : type *trapeziella*, Zeller [N. India].
|| Autogriphus, Wlsm. 1897.
|| Pexinola, Hmp. 1900.
|| Propedesis, Wlsm. 1900.
|| Tribonica, Meyr. 1905.

Gel. MERIDORMA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 31 : type *thrombodes*, M. [Br. Guiana].

Gel. MERIMNETRIA, Walsingham 1907.
Faun. Hawaii. I 482 : type *flaviterminella*, Wlsm. [Hawaii].

Tortr. MERITASTIS, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 255 : type *umbrosa*, M. [Australia].

Oec. MERMERISTIS, Meyrick 1915.
Exot. Micr. I 298 : type *spodiaea*, M. [Tasmania].

Aluc. Merrifieldia, Tutt (*non-descr.*). (ALUCITA, Linn.).
Ent. Rec. XVII 37 (1905) (*nom. nud.*) : type *tetradactyla*, Linn. [Europe].

Oec. MESOLECTA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 371 : type *psacasta*, M. [S. Australia]
|| Talantis, Meyr. 1888.

Tin. MESOPHERNA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 514-515 : type *palustris*, M. [S. E. Australia].

Gel. MESOPHLEPS, Hübner 1826.
Verz., pp. 405-406 : type *silacella*, Hb. [Europe ; Asia Minor].

Tin. Mesopolia, Walsingham 1897. (MELASINA, Bdv.).
T. E. S. 1897. 62 : type *inconspicua*, Wlsm. [W. Africa].

Crypt. Mesoptycha, Zeller 1854. (STENOMA, Zeller).
Linn. Ent. IX 355, 387-389, t. 3 ff. 26-28 : type *nictitans*, Zeller [Brazil].

Oec. MESOTHYRSA, Meyrick 1910.
B. J. XX 161 : type *aeolopis*, M. [S. India].

Gel. METABOLAEA, Meyrick 1923.
Exot. Micr. III 32 : type *chlorophthalma*, M. [Brazil].

Metach. METACHANDA, Meyrick 1911.
Tr. Linn. Soc. (2) XIV 275-276 : type *thaleropis*, M. [Seychelles].

Tin. METACHARISTIS, Meyrick 1922.
Exot. Micr. II 602 : type *zonophanes*, M. [India].

Adel. Metallitis, Sodoffsky 1837. (ADELA, Latreille).
Bull. Soc. Imp. Nat. Mosc. X, No. 6, p. 95 : type *reaumurella*, L. [Europe].

Eupist. Metallosetia, Stephens 1834. (EUPISTA, Hb.).
Ill. Brit. Ent., Haust. IV 283 : type *spissicornis*, Hw. [Europe].

Epeim. Metamorpha, Frey 1878 (*praeocc.*). (IDIOGLOSSA, Wlsm.).
Stett. ent. Ztg. XXXIX 278 : type *miraculosa*, Frey [N. America].

Gel. METANARSIA, Staudinger 1871.
Berl. ent. Zeit. XIV. 315 : type *modesta*, Stdgr. [S. E. Russia ; Turkestan].

Oec. METAPHRASTIS, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 134 : type *acrochalca*, M. [W. Australia].

Aeg. METASPHECIA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 335 : type *milleti*, Le Cerf [Senegal].

Tin. METASTICHA, Meyrick 1921.
Zool. Meded. VI 196 : type *centrodoxa*, M. [Java].

Prototh. METATHEORA, Meyrick 1919.
Exot. Micr. II 229 : type *parachlora*, M. [Natal].

Crypt. METATHRINCA, Meyrick 1908.
B. J. XVIII 625 : type *ancistrias*, M. [Ceylon].

Gel. METEORISTIS, Meyrick 1923.
Exot. Micr. III 27 : type *religiosa*, M. [India].

Ypon. METHARMOSTIS, Meyrick 1921.
Exot. Micr. II 439 : type *asaphaula*, M. [W. India].

Glyph. Methypsa, Butler 1875. (IMMA, Wlk.).
T. E. S 1875. 324 : type *saturata*, Wlk. [Java].

Gel. METOPLEURA, Busck 1912.
Proc. E. S. Wash. XIV 83 : type *potosi,* Busck [Mexico].

Chlid. METRERNIS, Meyrick 1906.
B. J. XVII 414 : type *ochrolina,* M. [Ceylon].

Lyon. METRIOCHROA, Busck 1900.
Proc. U. S. Nat. Mus. XXIII 244-245, t. 1 f. 13 : type *psychotriella,* Busck [Florida].

Eupist. METRIOTES, Herrich-Schäffer 1853.
Schmett. Eur. V 48, t. 13 f. 19 : type *modestellus,* Dup. [Europe].
|| Asychna, Stainton 1854.

Carp. METROGENES, Meyrick 1926.
Sarawak Mus. Jl. III 161 : type *deltocycla,* M. [Borneo].

Gel. METZNERIA, Zeller 1839.
Isis XXXII 197 : type *paucipunctella,* Zeller [Europe ; W. C. Asia].
|| Cleodora, Stephens 1834 (*praeocc.*).
|| Parasia, Duponchel 1846.

Aeg. MICRECIA, Hampson 1919.
Novit. Zool. XXVI 113 : type *methyalina,* Hmp. [Kei Isds.].

Oec. Microbela, Meyrick 1885. (COESYRA, Meyr.).
P. Linn. Soc. N. S. W. IX 1016 : type *allocoma,* M. [Australia].
Microbela, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species).

Cosm. MICROCOLONA, Meyrick 1897.
P Linn. Soc. N. S. W. XXII 370-371 : type *characta,* M. [E. Australia ; New Zealand].

Tortr. Microcorses, Walsingham 1900. (? CNEPHASIA, Curtis).
A. M. N. H (7) V 465 : type *marginifasciatus,* Wlsm. [Japan].

Tin. Micrococcus, Walsingham 1887. (MELASINA, Bdv.).
Moore's Lep. Ceylon III 498 : type *mackwoodii,* Wlsm. [Ceylon].

Oec. MICROLOCHA, Meyrick 1914.
Exot. Micr. I 241 : type *entypa,* M. [N. Australia].

Micropt. MICROPARDALIS, Meyrick 1912.
Wyts. Gen. Ins., fasc. 132, p. 7 : type *doroxena,* M. [New Zealand].

[*Note. Fide* Tillyard (T. E. S. 1923. 182) this genus is not distinct from *Sabatinca,* Wlk.].

Helioz. MICROPLITIS, Meyrick 1922.
Exot. Micr. II 555 : type *desmophanes,* M. [Assam].

Lyon. MICROPOSTEGA, Walsingham 1891.
T. E. S. 1891. 130 : type *aeneofasciata*, Wlsm. [S. Africa].

Micropt. MICROPTERIX, Hübner 1826.
Verz., p. 426 : type [*aruncella*, Scop.=] *podevinella*, Hb. [Europe].
|| Micropteryx, Zeller 1839 (*emend.*).
|| Eriocephala, Curtis 1839.

Orn. MICROSCHISMUS, Fletcher 1909.
Entom. XLII 253 : type *fortis*, Wlsm. [S. Africa].
|| Macrembola, Meyr. 1909.

Gel. Microsetia, Stephens 1834. (ARISTOTELIA, Hb.).
Ill. Brit. Ent., Haust. IV 263-264 : type *stipella*, Hb. [Europe ; E. Siberia ; S. Africa].
Microsetia, Steph., Cat. Brit. Ins. II 207 (1829) (*non-descr.*).

Aeg. Microsphecia, Bartel 1912. (TRICHOCEROTA, Hmp.).
Seitz Lep. Pal. II 414 : type *tineiformis*, Esper [Europe].

Crypt. MICROSTOLA, Lower 1920.
Tr. R. Soc. S. Austr. XLIV 68 : type *ammoscia*, Lower [N. Queensland].

Lyon. Microthauma, Walsingham 1891. (CROBYLOPHORA, Meyr.).
T. E. S. 1891. 127 : type *metallifera*, Wlsm. [S. Africa].

Lith. Micrurapteryx, Spuler 1910. (PARECTOPA, Clemens).
Schmett. Eur. II 409 : type *kollariella*, Zeller [Europe ; Asia Minor].

Tortr. MICTONEURA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 419-420 : type *flexanimana*, M. [E. Australia].

Glyph. MICTOPSICHIA, Hübner 1826.
Verz., p. 374 : type *hubneriana*, Stoll [C. & S. America].

Ypon. Mieza, Walker 1854. (LACTURA, Wlk.).
Cat. II 527-528 : type [*laeta*, Hb. =] *igninix*, Wlk. [Florida].

Glyph. Millieria, Ragonot 1874. (CHOREUTIS, Hb.).
Bull. S. E. Fr. (5) IV 173 : type *dolosana*, H. S. [S. Europe ; S. W. Asia].
|| Milliereia, Spuler 1910 (*emend*).

Aluc. Mimaeseoptilus, Wallengren 1859. (STENOPTILIA, Hb.).
K. Svensk. Vet. Akad. III, No. 7, p. 17 (? 1862) : type [*pelidnodactyla*, Stein=] *mictodactylus*, Zeller [Europe].

Oec. Mimobrachyoma, Lower 1902. (LEPTOCROCA, Meyr.).
Tr. R. Soc. S. Austr. XXVI 242 : type *eusema*, Lower [N. S. Wales].

Oec. MIMODOXA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 96 : type *dryina*, Lower [E. Australia].

Tin. MIMOSCOPA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 525 : type *ochetaula*, M. [N. S. Wales].

Oec. MIMOZELA, Meyrick 1914.
Exot. Micr. I 225 : type *rhoditis*, M. [Queensland].

Glyph. Miscera, Walker 1863. (SAGALASSA, Wlk.).
Cat. XXVIII 457-458 : type *resumptana*, Wlk. [N. S. Wales].

Lyon. MITROGONA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep., pp. 94-95 : type *laevis*, M. [Br. E. Africa].

Oec. MIXODETIS, Meyrick 1902.
Tr. R. Soc. S. Austr. XXVI 172 : type *ochrocoma*, Lower [N. S. Wales].
|| Paratheta, Lower 1899 (*non-descr.*).

Eucosm. Mixodia, Stainton 1859. (ARGYROPLOCE, Hb.).
Manual II 264 : type *schulziana*, Fb. [Europe].
Mixodia, Gn., Ann. S. E. Fr. (2) III 160 (1845) (*non-descr.*).
Mixodia, Steph., List Brit. Anim. B. M. X 75 (1852) (*non-descr.*).

Tortr. Mixogenes, Zeller 1877. (EULIA, Hb.).
H. S. E. R. XIII 304, t. 3 ff. 88 *a-c.* : type *penthinella*, Zeller [Colombia].

Eriocran. MNEMONICA, Meyrick 1912.
Wyts. Gen. Ins., fasc. 132, p. 5 : type *subpurpurella*, Hw. [Europe].
|| Dyseriocrania, Spuler 1910 (*non-descr.*).

Ypon. MNEMOSES, Durrant 1922.
T. E. S. 1921. 494 : type *farquharsoni*, Durrant [W. Africa].

Mnesarch MNESARCHÄEA, Meyrick 1886.
Tr. N. Z. Inst. XVIII 180 : type *paracosma*, M. [New Zealand].

Oec. Mnesichara, Walsingham 1912. (FILINOTA, Busck).
Biol. Centr. Am., Het. IV 126, f. 28 : type *dictyota*, Wlsm. [Guatemala].

Tortr. MNESIPYRGA, Meyrick 1913.
T. E. S. 1913. 170 : type *trichostrota*, M. [Peru].

Gel. MNESISTEGA, Meyrick 1918.
Exot. Micr. II 101 : type *talantodes*, M. [S. India].

Gel. MNESTERIA, Meyrick 1910.
T. E. S. 1910. 438 : type *pharetrata*, M. [Ceylon].

Glyph. Moca, Walker 1863. (IMMA, Wlk.).
Cat. XXVII 102 : type *velutina*, Wlk. [Ceylon ; India]

Tin. MOERARCHIS, Durrant 1914.
Biol. Centr. Am., Het. IV 358 : type *australasiella*, Donovan [E. Australia].
|| *Scardia* [nec Tr.], Meyr., P. Linn. Soc. N. S. W. XVII 520 (1892).

Gel. MOLOPOSTOLA, Meyrick 1920.
Exot. Micr. II 298 : type *rufitecta*, M. [French Guiana].

Schreck. MOLYBDURGA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 369 : type *metallophora*, M. [Victoria].

Gel. MOMETA, Durrant 1914.
Bull. Ent. Res. V 243 : type *zemiodes*, Durrant [Nigeria ; Kenya].

Cosm. MOMPHA, Hübner 1826.
Verz., p. 414 : type *conturbatella*, Hb. [Europe].
|| Tebenna, Hb. 1826.
|| Laverna, Curtis 1839.
|| Lophoptilus, Sircom 1818.
|| Cyphophora, H. S. 1853.
|| Psacaphora, H. S. 1853.
|| Walshia, Clemens 1864.
|| Wilsonia, Clemens 1864.
|| Perimede, Chambers 1871.
|| Eriphia, Chambers 1875.
|| Ithome, Chambers 1875.
|| Leucophryne, Chambers 1875.
|| Heinemannia, Wocke 1876.
|| Homoeoprepes, Wlsm. 1909.
|| Synallagma, Engel 1907.

Gel. MONERISTA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 208 : type *hippastis*, M. [Assam].

Eucosm. Monilia, Walker 1866. (SPILONOTA, Stephens).
Cat. XXXV 1741 : type *semicanella*, Wlk. [New Guinea ; E. Australia].

Gel. Monochroa, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschm. II. i. 308 : type *tenebrella*, Hb. [Europe].

Aeg. MONOPETALOTAXIS, Wallengren 1858.
Kongl. Vet. Akad. Forh. II 135 : type [*doleriformis*, Wlk.=] *wahlbergi*, Wlgn. [S. Africa].
|| **Trochilina, Hmp. 1919.**

Tin. MONOPIS, Hübner 1826.

Verz., p. 401 : type *rusticella*, Hb. [Europe ; Asia Minor ; N. America].

|| Blabophanes, Zeller 1852.

|| Hyalospila, H. S. 1853.

|| Rhitia, Wlk. 1864.

|| Eusynopa, Lower 1903.

Eucosm. Monosphragis, Clemens 1860. (EUCOSMA, Hb.).

Proc. Acad. Nat. Sci. Philad. XII 354 : type *otiosana*, Clem. [N. America].

Cosm. MORILOMA, Busck 1912.

Smiths Inst. Misc. Coll. LIX, Pubn 2079, p. 3 : type *pardella*, Busck. [Panama].

Tin. Morophaga, Herrich-Schäffer 1854. (SCARDIA, Treits.).

Schmett. Eur. V 78 : type *morella*, Dup. [S. Europe : Asia Minor].

Morophaga, H S., Schmett. Eur. V 22 (1853). [Invalid ; no associated species].

Ypon. MOROTRIPTA, Meyrick 1917.

Ann. S. Afr. Mus. XVII 11 : type *fatigata*, M. [Rhodesia].

Oec. MORPHOTICA, Meyrick 1915.

Exot. Micr. I 297 : type *mirifica*, M. [N. Australia].

Crypt. Mothonica, Walsingham 1912. (STENOMA, Zeller).

Biol. Centr. Am., Het. IV 153 : type *periapta*, Wlsm. [Costa Rica].

Cosm. Mothonica, Meyrick 1921 (*praeocc.*). (MOTHONODES, Meyr.).

Exot. Micr. II 456 : type *obusta*, M. [Victoria].

Cosm. MOTHONODES, Meyrick 1922.

Entom. LV 16 : type *obusta*, M. [Victoria].

|| Mothonica, Meyr. 1921 (*praeocc.*).

Gel. MUSURGA, Meyrick 1923.

Exot. Micr. III 3 : type *sandycitis*, M. [Assam].

Ypon. MYCHONOA, Meyrick 1892.

P. Linn. Soc. N. S. W. XVII 558-559 : type *mesozona*, M. [Queensland].

Gel. MYCONITA, Meyrick 1923.

Exot. Micr. III 27 : type *plutelliformis*, Snellen. [Java ; India].

Glyph. MYLOCERA, Turner 1897.

Ann. Queensl. Mus. IV 27 : type *tenebrifera*, Turner. [Queensland].

Elach. MYLOCRITA, Meyrick 1922.
Exot. Micr. II 507 : type *acratopis*, M. [S. Australia].

Oec. MYLOTHRA, Meyrick 1907.
B. J. XVII 742 : type *creseritis*, M. [Baluchistan].

Crypt. Myriopleura, Meyrick 1906. (ODITES, Wlsm.).
B. J. XVII 405 : type *psilotis*, M. [Ceylon].

Aeg. Myrmecosphecia, Le Cerf 1917. (ZENODOXUS, G. & R.).
Obth., Et. Lep. Comp. XIV 374 : type *lemoulti*, Le Cerf. [French Guiana].

Tin. MYRMECOZELA, Zeller 1852.
Linn. Ent. VI 103, 176 : type *ochraceella*, Tengstrom. [N. Europe ; N. Asia].
|| Amydria, Clemens 1859.
|| Amadrya, Chambers [*lapsus*].
|| Casape, Wlk. 1864.
|| Pseoadioides, Butler 1882.
|| Promasia, Chrétien 1905.
|| Scyrotis, Meyr. 1909.
|| Proxerantis, Meyr. M S (*ined.*).

Gel. MYROPHILA, Meyrick 1923.
Exot. Micr. II 624 : type *carycina*, M. [Guiana : Brazil].

Elach. MYRRHINITIS, Meyrick 1913.
Ann. Transv. Mus. III 322 : type *sporeuta*, M. [Transvaal].

Aeg. MYRSILA, Boisduval 1875.
Lep. Het. I 433 : type *auripennis*, Bdv. [Brazil].
[Not recognized : perhaps a synonym].

Crypt. MYSAROMIMA, Meyrick 1926.
Exot. Micr. III 227 : type *liquescens*, M. [Colombia].

Crypt. MYSTACERNIS, Meyrick 1915.
Exot. Micr. I 370 : type *alphesta*, M. [Nyasaland].

Gel. Mystax, Caradja 1920 (*praeocc.*) (THIOTRICHA, Meyr.).
Iris XXXIV 136 : type *trichoma*, Caradja. [Siberia].

Gel. MYTHOGRAPHA, Meyrick 1923.
Exot. Micr. II 626 : type *chartaria*, M. [Ceylon].

Tin. MYTHOPLASTIS, Meyrick 1919.
Exot. Micr. II 277 : type *exanthes*, M. [French Guiana].

N.

Gel. Naera, Chambers 1875 (*praeocc.*). (LEUCE, Chambers).
Canad. Ent. VII 9, 51 : type *fuscocristatella*, Chambers. [Texas].

Gel. Nannodia, Heinemann 1870. (ARISTOTELIA, Hb.).
Schmett. Deuts., Kleinschm. II. i. 284 : type *stipella*, Hb. [Europe].

? NANTHILDA, Blanchard 1840.
Hist. Ins. III 549 [? *descr.*] : type *ernestinana*, Blanchard [loc ?]. [Unrecognized].

Glyph. NAPECOETES, Turner 1913.
P. Linn. Soc. N. S. W. XXXVIII 218 : type *crossospila*, Turner. [Queensland].

Gel. NARTHECOCEROS, Meyrick 1906.
B. J. XVII 148 : type *platyconta*, M. [Ceylon].

Tin NARYCIA, Stephens 1836.
Ill. Brit. Ent., Mandib. VI 154 : type [*monilifera*, Geoffroy=] *elegans*, Stephens. [Europe].
|| Diplodoma, Zeller 1852.
|| Xysmatodoma, Zeller 1852.
|| Conoeca, Scott 1865.
Oecobia, Scott 1865.
|| Sapheneutis, Meyr. 1907.
|| Thranitica, Meyr. 1908.

Eupist. NASAMONICA, Meyrick 1922.
Exot. Micr. II 555 : type *oxymorpha*, M. [C. Africa].

Oec. NASTOCERAS, Chrétien 1922.
Obth., Et. Lep. Comp. XIX 364, figs. : type *colluellum*, Chrét. [Morocco].

Gel. NEALYDA, Dietz 1900.
Entl. News XI 350-351 : type *bifidella*, Dietz. [Colorado].

Oec. Necedes, Walsingham 1912. (PSITTACASTIS, Meyr.).
Biol. Centr. Am., Het. IV 138 : type *stigmaphylli*, Wlsm. [Jamaica].

Gel. Neda, Chambers 1874 (*praeocc.*). (MEGACRASPEDUS, Zeller).
Canad. Ent. VI 243-244 : type *plutella*, Chambers. [Kentucky

Diplos. NEELYSIA, Walsingham 1907.
Faun. Hawaii. I 532 : type *lignicolor*, Wlsm. [Hawaii].

Tin. Nemapogon, Schrank 1802. (TINEA, Linn.).
Fauna Boica II. ii. 167 : type *granella*, Linn. [Europe ; N. America].

Ypon. NEMATOBOLA, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 591-592 : type *candescens*, M. [S. E. Australia].

Adel. Nematois, Walsingham. (See Nemotois).

Adel. NEMATOPOGON, Zeller 1839.
Isis XXXII 185 : type *schwarziella*, Zeller. [C. & S. Europe ; N. Africa].
|| Nemophora, Hübner 1826 (*praeocc.*).
|| Scacotes, Durrant 1915.

Adel. NEMOPHORA, Hofmannsegg 1798.
Illiger's Verz. Käfe Preussens, p. 499 : type *degeerella*, Linn. [Europe].
|| Elasmion, Hb. 1806 (*non-descr.*
|| Eutyphia, Hb. 1826.
|| Epityphia, Hb. 1826.
|| Nemotois, Hb. 1826.
|| Ucetia, Wlk. 1866.

Adel. Nemophora, Hübner 1826 (*praeocc.*). (NEMATOPOGON, Zeller).
Verz., p. 417 : type *swammerdammella*, Linn. [Europe].

Adel. Nemotois, Hübner 1826. (NEMOPHORA, Hofm.).
Verz., p. 416 : type [*fasciella*, Fb.=] *schiffermillerella*, Hb. [C. & S. Europe].

Gel. NEOCHRISTA, Meyrick 1923.
Exot. Micr. II 625 : type *auritogata*, Wlsm. [C. America.].

Gel. NEOCORODES, Meyrick 1923.
Exot. Micr. III 36 : type *amnesta*, M. [Cyprus].

Gel. NEODACTYLOTA, Busck 1903.
Proc. U. S. Nat. Mus. XXV 835, t. 30 ff. 21-23 : type *snellenella*, Wlsm. [Arizona].
|| Eudactylota, Wlsm. 1911.

Crypt. Neodrepta, Turner 1897. (PHTHONERODES, Meyr.).
Ann. Queensl. Mus. IV 24 : type *luteolactella*, Wlk. [S. E. Australia].

Tin. Neolophus, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887. 141 : type *furcatus*, Wlsm. [Arizona].

Tin. NEOMERISTIS, Meyrick 1919.
Exot. Micr. II 262 : type *abscensella*, Wlk. [Venezuela

Coprom. NEOPHYLARCHA, Meyrick 1926.
Exot. Micr. III 240 : type *helicosema*, M. [Br. & Fr. Guiana].

Eriocran. NEOPSEUSTIS, Meyrick 1909.
B. J. XIX 436 : type *calliglauca*, M. [Assam].

Oec. NEOSIGALA, Turner 1917.
Tr. R. Soc. S. Austr. XLI 118 : type *ceroplasta*, Turner [Queensland].

Crypt. NEOSPASTIS, Meyrick 1917.
Exot. Micr. II 59 : type *encryphias*, M. [Assam].

Aeg. NEOSPHECIA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 237-238 : type *combusta*, Le Cerf. [Bolivia].
Neosphecia, Le Cerf, Obth. Et. Lep. Comp. XII 9 (1916) (*non-descr.*).

Oec. NEOSSISYNOECA, Turner 1923.
T. E. S. 1923. 171-172 : type *scatophaga*, Turner. [Queensland].

Aeg. NEOTINTHIA, Hampson 1919.
Novit. Zool. XXVI 115 : type *semihyalina*, Hmp. [Burma].

Crypt. NEPHANTIS, Meyrick 1905.
B. J. XVI 603 : type *serinopa*, M. [India ; Ceylon ; Burma].

Tortr. Nephodesme, Hübner 1826. (CNEPHASIA, Curtis).
Verz., p. 390 : type *penziana*, Thunberg. [Europe].

Oec. NEPHOGENES, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 372-373 : type *philopsamma*, M. [S. Australia].
Nephogenes, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species].
|| Coesyra, Meyr. 1884.
|| Brachynemata, Meyr. 1885.
|| Microbela, Meyr. 1885.

Stigm. Nepticula, Heyden 1843. (STIGMELLA Schrank).
Bericht Versamml. Naturf. Mainz 1843, p. 208 : type *aurella*, Fb. [Europe ; N. Africa].

Gel. NESOLECHIA, Meyrick 1921.
Exot. Micr. II 425 : type *horogramma*, M. [Fiji].

Tin. NESOPHYLAX, Meyrick 1926.
Exot. Micr. III 320 : type *xanthoschema*, M. [New Guinea].

Tortr. NESOSCOPA, Meyrick 1926.
T. E. S. LXXIV 271 : type *exsors*, M. [Rapa Isd. (Pacific)].

Eucosm. Neurasthenia, Walsingham and Durrant (? *ined.*). (EUCOSMA, Hb.). .... ; type *pygmaeana*, Hb. [Europe].

[*Note*. This name is not included in Zoological Record and I have been unable to trace it to any origin connected with Wlsm. and Drt. ; it is described by Pierce (*Genit. Brit. Tortr.*, p. 65 : 1922), who may have validated it.]

Lith. Neurobathra, Ely 1918. (ACROCERCOPS, Wlgn.).
Proc. E. S. Wash. XIX 41, t. 9 f. 2 : type *strigifinitella*, Clem. [N. America].

Lith. Neurolipa, Ely 1918. (PARECTOPA, Clemens).
Proc. E. S. Wash. XIX 39, t. 7 f. 2 : type *randiella*, Busck. [U. S. America].

Lith. Neurostrata, Ely 1918. (ACROCERCOPS, Wlgn.).
Proc. E. S. Wash. XIX 41, t. 9 f. 4 : type *gunniella*, Busck. [N. America].

Gel. NEVADIA, Caradja 1920.
Iris XXXIV 117 : type *ribbeella*, Caradja. [Spain].

Cosm. NICANTHES, Meyrick 1928.
Exot. Micr. III 395 : type *rhodoclea*, M. [Brit. Guiana].

Glyph. Nigilgia, Walker 1863. (PHYCODES, Gn.).
Cat. XXVIII 511-512 : type *adjectella*, Wlk. [Sierra Leone].

Aeg. Ninia, Walker 1856. (TOOSA, Wlk.).
Cat. VIII 72 : type *plumipes*, Drury. [W. Africa].

Plut. NIPHONYMPHA, Meyrick 1914.
Exot. Micr. I 174 : type *dealbatella*, Zeller. [S. Europe].
|| Calantica, Zeller 1847 (*praeocc.*).

Oec. Nochelodes, Meyrick 1920. (SYRINGOPAIS, Hering.)
Exot. Micr. II 367 : type [*temperatella*, Led.=] *xenicopa*, M. [Palestine].

Lyon. Nocturno, Gistel (*non-descr.*). (LYONETIA, Hb.)
. ... : type *clerkella*, Linn. [Europe].

Gel. NOEZA, Walker 1866.
Cat. XXXV 1839-1840 : type *telegraphella*, Wlk. [Brazil].

Gel. Nomia, Clemens 1860 (*praeocc.*). (ARISTOTELIA, Hb.)
Proc. Acad. Nat. Sci. Philad. XII 167 : type *lingulacella*, Clem. [N. America].

Tin. NOMIMA, Durrant 1916.
P. Z. S. 1916, 178-179 : type *prophanes*, Durrant [Somaliland].
|| Theatrista, Meyr. 1917.

Eucosm. Norma, Heinrich 1923. (EUCOSMA, Hb.)
U. S. Nat. Mus. Bull. 123, p. 191, ff. 33, 114 : type *dietziana*, Kearfott [U. S. America].

Gel. NOSPHISTICA, Meyrick 1911.
B. J. XX 733 : type *erratica*, M. [Ceylon].

Ypon. NOSYMNA, Walker 1864.
Cat. XXIX 831 : type *repletella*, Wlk. [Sarawak].
|| Androgyne, Wlsm. 1900.

Eucosm. Noteraula, Meyrick 1892. (BACTRA, Stephens.)
Tr. N. Z. Inst. XXIV 217 : type [*noteraula*, Wlsm.=] *straminea*, Meyr. nec Butl. [New Zealand].

Gel. NOTHRIS, Hübner 1826.
Verz., p. 411 : type *verbascella*, Schiff. [Europe ; W. Asia].

Eucosm. NOTOCELIA, Hübner 1826.
Verz., pp. 379-380 : type *udmanniana*, Linn. [Europe ; Asia Minor].
|| Aspis, Treits. 1830 (*praeocc.*).
|| Aspidia, Duponchel 1831.

Eperm. NOTODRYAS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 127 : type *acria*, M. [E. Australia].

Crypt. NOTOSARA, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 52 : type *nephelotis*, M. [W. Australia].

Gel. NUMATA, Busck 1906.
Proc. U. S. Nat. Mus. XXX 721, f. 2 : type *bipunctella*, Busck. [Texas].

Aeg. NYCTAEGERIA, Le Cerf 1915.
Bull. Mus. Paris XX 336 : type *rohani*, Le Cerf [Angola].

Tin. Nycterina, Meigen 1832. (EUPLOCAMUS, Latreille.)
Syst. Beschr. Eur. Schmett. III 263 : type *anthracinalis*, Scop. [Europe].

Crypt. Nycterobius, Freeman (*non-descr.*) (CRYPTOPHASA, MacLeay.)
Life of Kirby, p. 227 (1852) (*nom. nud.*) : type (?).

Ypon. Nygmia, Hübner 1826 (*praeocc.*) (YPONOMEUTA, Latreille.)
Verz., p. 412 : type *evonymella*, Linn. [Europe].

Ypon. NYMPHONIA, Meyrick 1913.
Exot. Micr. I 136 : type *zaleuca*, M. [N. Australia].

Oec. NYMPHOSTOLA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 491-492 : type *galactina*, Felder [New Zealand].
Nymphostola, Meyr., P. Linn. Soc. N. S. W. VII 424 (1883) [Invalid ; no associated species].

O

Stigm. OBRUSSA, Braun 1915.
Canad. Ent. XLVII 196: type *ochrefasciella*, Chambers [U. S. America].

Tortr. OCHETARCHA, Meyrick 1924.
Tr. N. Z. Inst. LV 661: type *miraculosa*, M. [New Zealand].

Tin. OCHETOXENA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 305: type *phaneraula*, M. [Cape Colony].

Oec. OCHLOGENES, Meyrick 1886.
P. Linn. Soc. N. S. W. X 797: type *advectella*, Wlk. [Australia].
Ochlogenes, Meyr., P. Linn. Soc. N.S. W. VII 425 (1883) [Invalid; no associated species].

Gel. OCHMASTIS, Meyrick 1908.
Rec. Ind. Mus. II 396: type *chionacma*, M. [S. Burma].
[*Note*.—This genus was omitted from Wyts. Gen. Ins., fasc. 184.]

Eperm. OCHROMOLOPIS, Hübner 1826.
Verz., p. 408: type *ictella*, Hb. [Europe].

Tin. OCHSENHEIMERIA, Hübner 1826.
Verz., p. 416: type *bubalella*, Hb. [France; Spain].
|| Phygas, Treits. 1833.
|| Lepidocera, Steph. 1834.

Aluc. OCHYROTICA, Walsingham 1891.
E. M. M. XXVII 217-218: type *fasciata*, Wlsm. [C., S., & Ins. America].

Ypon. OCNEROSTOMA, Zeller 1847.
Linn. Ent. II 298-299: type *piniariella*, Zeller [Europe].

Tin. OCNOPHILA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 345: type *autocrypta*, M. [Cape Colony].

Oec. OCTASPHALES, Meyrick 1886.
T. E. S. 1886, 283: type *charitopa*, M. [New Guinea].

Oec. OCYPHRON, Meyrick 1921.
Ann. Transv. Mus. VIII 103: type *oxyphylla*, M. [Rhodesia].

Oec. OCYSTOLA, Meyrick 1885.
P. Linn. Soc. N. S. W. IX 1058: type *paulinella*, Newman [E. Australia].

Crypt. ODITES, Walsingham 1891.
T. E. S. 1891, 99-102, t. 7, f. 80 : type *natalensis*, Wlsm. [Africa].
|| Euteles, Hein. 1870 (*praeocc.*).
|| Trichernis, Mey. 1894.
|| Hylypnes, Turner 1897.
|| Myriopleura, Mey. 1906.
|| Theatria, Wlsm. 1912.

Gel. Oecia, Walsingham 1897. (MACROCERAS, Stdgr.)
P. Z. S. 1897, 111 : type *oecophila*, Stdgr. [Tropics and Subtropics].

Glyph. Oecinea, Scott 1865. (CEBYSA, Wlk.)
Austral. Lep. I 28-29 : type [*leucotelus*, Wlk.=] *scotti*, Scott [E. Australia].

Tin. Oecobia, Scott 1865. (NARYCIA, Stephens.)
Austral. Lep. I 27, t. 9 : type *frauenfeldi*, Scott [E. Australia].

Gel. OECOCECIS, Guenée 1870.
Ann. S. E. Fr. 1870, 14 : type *guyonella*, Gn. [N. Africa ; Cyprus ; Syria].

Gel. OECOGONIA, Stainton 1854.
Lep. Brit. Tin., p. 162, t. 5 ff. 7*a-c* : type *quadripuncta*, Hw. [Europe].
|| Apatema, Wlsm. 1900.
|| Clerogenes, Mey. 1921.

Oec. OECOPHORA, Latreille 1802.
Hist. Nat. Crust. Ins. III 417 : type [*bractella*, Linn =] *sulphurella*, Latr. nec Fb. [Europe].
Oecophora, Latr., Préc. Gen. Ins., pp. 146-147 (1796) [Invalid ; no associated species].
|| Alabonia, Hb. 1826.
|| Enicostoma, Dup. 1838 (nec Steph.).

Lith. Oecophyllembius, Silvestri 1908. (PARECTOPA, Clemens.)
Boll. Lab. Zool. Portici II 196 : type [*latifoliella*, Mill.=] *neglectus* Silv. [S. Europe].

Schreck. OEDEMATOPODA, Zeller 1852.
Micr. Caffr., p. 96 : type *princeps*, Zeller [S. Africa].
|| Atkinsonia, Stainton 1859.

Tortr. Oenectra, Guenée 1845. (SPARGANOTHIS, Hb.)
Ann. S. E. Fr. (2) III 142 : type *pilleriana*, Schiff. [Europe].

Oec. OENOCHROA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 327-328 : type *lactella*, Wlk. [E. Australia].
Oenochroa, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species].

Oec. OENOCHRODES, Lower 1907.
Tr. R. Soc. S. Austr. XXXI 115 : type *crossoxantha*, Lower [S. Australia].

Tin. OENOE, Chambers 1874.
Canad. Ent. VI 50 : type *hybromella*, Chambers [U. S. America].

Tortr. Oenophthira, Duponchel 1845. (SPARGANOTHIS, Hb.)
Cat. Meth. Lep. Eur., p. 288 : type *pilleriana*, Schiff. [Europe].

Gel. Oeseis, Chambers 1875. (NOTHRIS, Hb.)
Cinc. Qly. Jl. Sci. II 255 : type [*sabinella*, Z.=] *biannulella*, Chambers [N. America].

Ypon. Oeta, Grote 1865. (ATTEVA, Wlk.)
Proc. E. S. Philad. V 230 : type *punctella*, Cramer [S. America].

Gel. OESTOMORPHA, Walsingham 1911.
Biol. Centr. Am., Het. IV 107-108 : type *alloea*, Wlsm. [Mexico, French Guiana].

Eucosm. Ofatulena, Heinrich 1926. (ENARMONIA, Hb.)
U. S. Nat. Mus. Bull. 132, pp. 39-40, ff. 30, 119 : type *duodecimstriata*, Wlsm. [S. W. United States].

Tin. OGMOCOMA, Meyrick 1924.
T. E. S. 1923, 556-557 : type *pharmacista*, M. [Rodriguez].

Aluc. OIDAEMATOPHORUS, Wallengren 1859.
K. Svensk. Vet. Akad. III, No. 7, p. 19 [? 1862] : type *lithodactylus*, Tr. [Europe].
|| Leioptilus, Wlgn. 1859 (? 1862).
|| Emmelina, Tutt 1905 (*non-descr.*).
|| Hellinsia, Tutt 1905 (*non-descr.*).
|| Ovendenia, Tutt 1905 (*non-descr.*).
|| Pterophorus, auct. (nec Geoffroy).

Lyon. OINOPHILA, Stephens 1848.
T. E. S. V., Proc., p. xli : type *v-flava*, Hw. [Europe ; S. Africa].
|| Gephyristis, Meyr. 1909.

Carp. Oistophora, Meyrick 1881. (CARPOSINA, H. S.)
P. Linn. Soc. N. S. W. VI 699 : type [*mediella*, Wlk.=] *pterocosmana*, M. [Australia].

Oec. OLBONOMA, Meyrick 1914.
Exot. Micr. I 244-245 : type *callopistis*, M. [N. Australia].

Gel. OLBOTHREPTA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 209 : type *hydrosema*, M. [S. India].

Eucosm. Olethreutes, Walsingham 1900. (ARGYROPLOCE, Hb.)
A. M. N. H. (7) VI 127-130: type *arcuella*, Clerck [Europe].
Olethreutes, Hb., Tentamen, p. 2 (1806) (*non-descr.*).

Ypon. Oliera, Brèthes 1917. (? CECIDOSES, Curtis.)
An. Ci. Argent. LXXXII 139: type *argentinana*, Brèthes [Argentina].

Aeg. OLIGOPHLEBIA, Hampson 1893.
Faun. Ind., Moths I 188, 201, 214: type *nigralba*, Hmp. [Ceylon].

Aeg. OLIGOPHLEBIELLA, Strand 1915.
Arch. f. Naturg. LXXXI (A. 8), p. 49: type *polishana*, Strand [Formosa].

Ypon. Oligos, Treitschke (*non-descr.*). (ARGYRESTHIA, Hb.)
Schmett. Eur. VIII 299 (1830) (*nom. nud.*): type [*nitidella*, Fb =] *pruniella*, Tr. [Europe].

Tortr. OLINDIA, Guenée 1845.
Ann. S. E. Fr. (2) III 178: type *ulmana*, Hb. [Europe].
|| Anisotaenia, Stainton 1859.

Tin. Olycha, Snellen 1903. (IPPA, Wlk.)
Tijds. Ent. XLVI 28-29: type *grossepunctella*, Snellen [W. Java].

Eucosm. OMIOSTOLA, Meyrick 1922.
Exot. Micr. II 519: type *alphitopa*, M. [Brazil].

Crypt. Ommatothelxis, Druce (*non-descr.*). (CYANOCRATES, Meyr.)
E. M. M. XLVIII 133 (1912) (*nom. nud.*): type *grandis*, Druce [W. Africa].

Gel. ONEBALA, Walker 1864.
Cat. XXIX 792: type *blandiella*, Wlk. [Ceylon].
|| Helcystogramma, Zeller 1877.
|| Dectobathra, Meyr. 1904.

Eucosm. Opadia, Guenée (*non-descr.*). (ENARMONIA, Hb.)
Ann. S. E. Fr. (2) III 182 (1845) (*non-descr.*): type *funebrana*, Tr. [Europe].
Opadia, Steph., List Brit. Anim. B. M. X 54 (1852) (*non-descr.*).
Opadia, Fernald, Genera Tortric., pp. 32, 57 (1908) (*non-descr.*).

Crypt. OPISINA, Walker 1864.
Cat. XXIX 789: type *arenosella*, Wlk. [loc. ?].

Lyon. OPOGONA, Zeller 1853.
Bull. Soc. Mosc. XXVI, Pt. 2, No. 4, p. 507, t. 4, ff. 13-16: type *dimidiatella*, Zeller [Java ; India].
|| Lozostoma, Stainton 1859.
|| Conchyliospila, Wlgn. 1861.

|| Cachura, Wlk. 1864.
|| Dendroneura, Wlsm. 1892.
|| Hieroxestis, Meyr. 1892.

Tortr. Oporinia, Hübner 1826 (*praeocc.*). (TORTRICODES, Stainton.)
Verz., p. 387 : type *tortricella*, Hb. [Europe].

Lyon. OPOSTEGA, Zeller 1839.
Isis XXXII 214 : type *salaciella*, Treits. [Europe].

Ypon. OPSICLINES, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 68 : type *leucomorpha*, Lower [S. Australia].

Oec. OPSIGENES, Meyrick 1918.
Ann. Transv. Mus. VI 30 : type *parastacta*, M. [Natal].

Oec. OPSITYCHA, Meyrick 1914.
Exot. Micr. I 249 : type *squalidella*, M. [S. E. Australia].

Cosm. Opszyga, Lower 1903. (LIMNAECIA, Stainton.)
Tr. R. Soc. S. Austr. XXVII 230 : type *eugramma*, Lower [N. S. Wales].
[Presumably misprint for *Opsizyga*.]

Tin. OPSODOCA, Meyrick 1919.
Exot. Micr. II 270-271 : type *metrodoxa*, M. [Brit. Guiana].

Eucosm. Orchemia, Guenée (*non-descr.*). (ENARMONIA, Hb.)
Ann. S. E. Fr. (2) III 192 (1845) [non-descr.] : type *gallicana*, Gn. [Europe].
Orchemia, Bruand, Cat. Syst. Micr. Doubs, p. 50 (1847) (*non-descr.* ; type fixation).
Orchemia, Wlsm., E. M. M. XXXIX 258 (1903) (*non-descr.*).
[*Note.*—This generic name is invalid as being non-descript.]

Glyph. Orchemia, Fernald 1900. (ANTHOPHILA, Hw.)
Canad. Entom. XXXII 238-239 : type *diana*, Hb. [U. S. America ; N. & C. Europe].

Coprom. ORDRUPIA, Busck 1911.
Proc. U. S. Nat. Mus. XL 228 [*Ordupia*— mispr.] : type *friserella*, Busck [C. & S. America].

Oec. ORESCOA, Turner 1927.
Proc. R. Soc. Tasmania 1926, p. 142 : type *homoconia*, Turner [Tasmania].

Oec. ORESITROPHA, Turner 1927.
Proc. R. Soc. Tasmania 1926, p. 151 : type *melanotypa*, Turner [Tasmania].

Gel. ORGANITIS, Meyrick 1906.
B. J. XVII 151 : type *characopa*, M. [Ceylon].

Ypon. ORINYMPHA, Meyrick 1927.
Exot. Micr. III 360 : type *aetherias*, M. [Texas].

Eucosm. ORIODRYAS, Turner 1925.
Tr. R. Soc. S. Austr. XLIX 59 : type *olbophora*, Turner [Queensland].

Orn. ORNEODES, Latreille 1802.
Hist. Nat. Crust. Ins. III 418 : type *hexadactyla*, Linn. [Europe].
Orneodes, Latr., Précis Caract. Ins., p. 148 (1796) [Invalid : no associated species].
|| Ripidophora, Hb. 1806 (*non-descr.*).
|| Euchiradia, Hb. 1826.
|| Alucita, auct. (nec Linn.).

Lith. Ornix, Treitschke 1833. (CALOPTILIA, Hb.)
Schmett. Eur. IX, ii, 194 : type [*stigmatella*, Fb.=] *upupaepennella*, Hb. [Europe].

Eupist. Ornix, Duponchel 1838 (nec Tr.). (EUPISTA, Hb.)
Ann. S. E. Fr. VII 148 : type [*vibicella*, Hb.=] *vibicipennella*, Dup. [Europe].

Lith. Ornix, Zeller 1839 (nec Tr.). (CALLISTO, Stephens.)
Isis XXXII 210 : type [*guttea*, Hw.=] *guttiferella*, Zeller [Europe]

Oec. Orophia, Hübner 1826. (HARPELLA, Schrank.)
Verz., p. 405 : type *forficella*, Scopoli [Europe].

Oec. Orophia, Meyrick 1884 (*praeocc.*). (PHILOBOTA, Meyr.)
P. Linn. Soc. N. S. W. IX 738 (? 1885) : type *cinctaca*, M. [Australia].
Orophia, Mey., P. Linn. Soc. N. S. W. VII 421 (1883) [Invalid : no associated species].

Tin. OROTHYNTIS, Meyrick 1913.
T. E. S. 1913, 191 : type *scrupulata*, M. [Colombia].

Gel. ORPHANOCLERA, Meyrick 1927.
Treubia VI 430 : type *tyriocoma*, M. [Java].

Crypt. Orphnolechia, Meyrick 1909. (STENOMA, Zeller.)
T. E. S. 1909, 28-29 ; type *crypsiphragma*, M. [S. America].

Oec. ORSIMACHA, Meyrick 1914.
Exot. Micr. I 186 : type *petasodes*, M. [Brit. Guiana].

Ypon. ORSOCOMA, Meyrick 1921.
Exot. Micr. II 438 : type *macrogona*, M. [Queensland].

Gel. ORSODYTIS, Meyrick 1926.
Exot. Micr. III 286 : type *marginata*, Wlsm. [W. Africa].

Oec. ORSOTRICHA, Meyrick 1914.
Exot. Micr. I 269 : type *venosa*, Butler [Chile].

Plut. ORTHENCHES, Meyrick 1885.
Tr. N. Z. Inst. XVIII 175 : type *chlorocoma*, M. [New Zealand].

Oec. ORTHIASTIS, Meyrick 1914.
Exot. Micr. I 247 : type *hypcrocha*, M. [N. S. Wales].

Plut. ORTHIOSTOLA, Meyrick 1927.
Exot. Micr. III 357 : type *lyroda*, M. [Colombia].

Lyon. ORTHOCHTHA, Meyrick 1928.
Exot. Micr. III 399 : type *hermatias*, M. [Seychelles].

Tortr. Orthocomotis, Dognin 1905. (EULIA, Hb.)
Ann. S. E. Belg. XLIX 85 : type *olivata*, Dognin [S. America].

Tin. Ortholophus, Walsingham 1887. (ACROLOPHUS, Poey.)
T. E. S. 1887, 169 : type *variabilis*, Wlsm. [Arizona].

Gel. ORTHOPTILA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 392 : type *abruptella*, Wlk. [S. E. Australia].

Ypon. ORTHOSARIS, Meyrick 1914.
B. J. XXIII 126 : type *strictulata*, M. [Ceylon].

Plut. ORTHOTAELIA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 195 : type *sparganella*, Thnbg [Europe].
Orthotelia, Steph., Cat. Brit. Ins. II 192 (1829) (*non-descr.*).
|| Agoniopteryx, Treits. 1835.
|| Caulobius, Duponchel 1846.

Eucosm. Orthotaenia, Curtis 1831. (EVETRIA, Hb.).
Brit. Ent. VIII, expl. t. 361 : type [*pinicolana*, Dbl.=] *turionella*, Curtis nec Linn. [England].

Cosm. ORTHROMICTA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 401 : type *galactitis*, M. [Queensland].

Oec. ORYGOCERA, Walsingham 1897.
T. E. S. 1897, 41-42 : type *carnicolor*, Wlsm. [W. Africa].

Tin. Oscella, Walker 1864. (TIQUADRA, Wlk.)
Cat. XXIX 783-784 : type *aeneonivella*, Wlk. [Venezuela].

Coprom. OSIDRYAS, Meyrick 1916.
Exot. Micr. II 7 : type *chersodes*, Turner [N. Queensland].

Aeg. Osminia, Le Cerf 1917. (CONOPIA, Hb.)
Obth., Et. Lep. comp. XIV 327 : type *ferruginea*, Le Cerf [Mexico].

Tin. Osphretica, Meyrick 1910. (SCARDIA, Tr.)
T. E. S. 1910, 475 : type [*bucephala*, Snellen=] *chomatias*, Meyr. [Siberia ; Borneo ; India].

Tin. OTOCHARES, Meyrick 1919.
Exot. Micr. II 244 : type *gypsopa*, M. [Brit. Guiana].

Cosm. OTONOMA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 358 : type *anemois*, M. [N. S. Wales].

Lyon. OTOPTRIS, Meyrick 1915.
T. E. S. 1915, 245 : type *lioxantha*, M. [Brit. Guiana].

Aluc. Ovendenia, Tutt (*non-descr.*). (OIDAEMATOPHORUS, Wlgn.)
Ent. Rec. XVII 37 (1905) (*nom. nud.*) : type *lienigianus*, Zeller [Europe ; India, etc.].

Tortr. Oxigrapha, Hübner 1826. (PERONEA, Curtis).
Verz., p. 386 : type *literana*, Linn. [Europe].
Oxygrapha, Stainton, Manual II 230 (1859) (*emend.*).

Gel. Oxybelia, Hübner 1826. (DICHOMERIS, Hb.)
Verz., p. 407 : type *ustulella*, Fb. [Europe].

Gel. OXYCRYPTIS, Meyrick 1912.
T. E. S. 1911, 692 : type *attonita*, M. [Colombia].

Gel. OXYGNOSTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 206 : type *diacma*, M. [Ceylon].

Gel. OXYLECHIA, Meyrick 1917.
T. E. S. 1917, 39 : type *confirmata*, M. [Colombia].

Tin. OXYLYCHNA, Meyrick 1916.
Exot. Micr. I 599 : type *phepsalias*, M. [Ceylon].

Tin. OXYMACHAERIS, Walsingham 1891.
T. E. S. 1891, 129 : type *niveocervina*, Wlsm. [S. Africa].

Tortr. Oxypate, Stephens 1834. (EXAPATE, Hb.)
Ill. Brit. Ent., Haust. IV 235 : type [*congelatella*, Cl.=] *gelatella*, Linn. [Europe].

Tortr. Oxypteron, Staudinger 1871. (TORTRICODES, Stainton.)
Berlin Ent. Zeits. XIV 276 : type *impar*, Stdgr. [S. E. Europe ; W. C. Asia].

Gel. Oxypteryx, Rebel 1911. (ACOMPSIA, Hb.)
Verh. z.-b. Ges. Wien LXI (151) : type *jordanella*, Rebel.

Aluc. OXYPTILUS, Zeller 1841.
Isis 1841, 765 : type *pilosellae*, Zeller [Europe].
|| Geina, Tutt 1906.
|| Crombrugghia, Tutt 1906.
|| Capperia, Tutt 1906.

Gel. Oxysactis, Meyrick 1923. (CYMOTRICHA, Meyr.)
Exot. Micr. III 35: type *sciritis*, M. [S. India].

Oec. OXYSCOPA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 335: type *dealbata*, M. [Cape Colony].

Oec. OXYTHECTA, Meyrick 1885.
P. Linn. Soc. N. S. W. IX 1049-1050: type *acceptella*, Wlk. [E. Australia].
Oxythecta, Meyr., P. Linn. Soc. N. S. W. VII 122 (1883) [Invalid; no associated species].

P

Gel. PACHNISTIS, Meyrick 1907.
B. J. XVII 737: type *cephalochra*, M. [Punjab].

Oec. PACHYBELA, Turner 1917.
Tr. R. Soc. S. Austr. XLI 94: type *eremaea*, Turner [Queensland].

Crypt. Pachycera, Lower (*non-descr.*). (GOMPHOSCOPA, Lower.)
Tr. R. Soc. S. Austr. XVII 184 (1893): type *caloryctopsis*, Lower [S. Australia].

Tin. PACHYDYTA, Meyrick 1922.
Exot. Micr. II 592: type *clitozona*, M. [Brazil; Peru].

Gel. PACHYGENEIA, Meyrick 1923.
Exot. Micr. III 11: type *clitellaria*, M. [Brazil; Peru].

Glyph. PACHYPHOENIX, Butler 1883.
T. E. S. 1883, 81: type *sanguinea*, Butler [Chile].

Tin. PACHYPSALTIS, Meyrick 1911.
Entom. Mitteil., Suppl. III, p. 60: type *insolens*, M. [Formosa].

Schreck. PACHYRHÁBDA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 312: type *steropodes*, M. [S. E. Australia].

Gel. PACHYSARIS, Meyrick 1914.
T. E. S. 1914, 276-277: type *rurigena*, M. [Brit. Guiana].

Eucosm. Paedisca, Treitschke 1830. (EUCOSMA, Hb.)
Schmett. Eur. VIII 188: type *solandriana*, Linn. [Europe].
Poedisca, Gn., Ann. S. E. Fr. (2) III 174 (1845) (*emend.*).

Orn. PAELIA, Walker 1866.
Cat. XXXV 1846: type *lunuligera*, Wlk. [Brazil].

Oec. PAEPIA, Walker 1864.
Cat. XXIX 828-829: type *carpocapsella*, Wlk. [Brazil].

Eucosm. Palaeobia, Meyrick 1881. (ACROCLITA, Lederer.)
P. Linn. Soc. N. S. W. VI 660-661 : type *hibbertiana*, Meyr. [N. S. Wales].

Micropt. Palaeomicra, Meyrick 1886. (SABATINCA, Wlk.)
Tr. N. Z. Inst. XVIII 180-182 : type *chrysargyra*, M. [New Zealand].

Tin. PALAEONEURA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 186 : type *amictopis*, M. [W. Australia].

Epipyr. PALAEOPSYCHE, Perkins 1905.
Hawaii. S. P. Assoc., Entl. Bull. No. 1, p. 80, f. 3 : type *melanias*, Perkins [Queensland].

Palaeos. PALAEOSES, Turner 1922.
T. E. S. 1921, 598-603, f. 6 : type *scholastica*, Turner [Queensland].

Tortr. PALAEOTOMA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 422 : type *styphelana*, M. [Australia].

Tin. PALAEPHATUS, Butler 1883.
T. E. S. 1883, 82 : type *falsa*, Butler [Chile].

Ypon. PALAETHETA, Meyrick 1909.
Ann. Transv. Mus. II 23 : type *ischnozona*, M. [S. Africa].

Glyph. PALAMERNIS, Meyrick 1906.
T. E. S. 1906, 205 : type *canonitis*, M. [India].

Oec. PALIMMECES, Turner 1916.
P. Linn. Soc. N. S. W. XLI 338 : type *ithysticha*, Turner [N. S. Wales].

Oec. PALINORSA, Meyrick 1924.
Exot. Micr. III 99 : type *literatella*, Busck [Guiana].

Gel. PALINTROPA, Meyrick 1913.
B. J. XXII 160 : type *hippica*, M. [Ceylon].

Ypon. PALLEURA,. Turner 1926.
Tr. R. Soc. S. Austr. L 146 : type *nitida*, Turner [Queensland].

Aeg. Palmia, Beutenmuller 1896. (CONOPIA, Hb.)
Bull. Am. Mus. Nat. Hist. VIII 123 : type *praecedens*, Hy.-Edw. [N. America].

Oec. Palparia, Wing 1849 (*praeocc.*). (WINGIA, Wlsm.)
P. Z. S. VII 105 : type *lambertella*, Wing [Australia].

Oec. Palpula, Treitschke 1833. (ANCHINIA, Hb.)
Schmett. Eur. IX, ii, 45 : type *daphnella*, Hb. [Europe].

Oec. Palpula, Duponchel 1838 (*praeocc.*). (PLEUROTA, Hb.)
Ann. S. E. Fr. VII 137-138 : type [*aristella*, Linn.=] ***bitrabicella***, Tr. [Europe].

Gel. PALTODORA, Meyrick 1894.
E. M. M. XXX 230 : type *cytisella*, Curtis [Europe ; Assam].
|| Cleodora, Stainton 1854 (nec Steph.).

? PALUMBINA, Rondani 1876.
Boll. Soc. Ent. Ital. VIII 23 : type *terebinthella*, Rondani [Sicily].
[Unrecognized ; *vide* Rebel, Cat. Lep. Pal. II 216 (1901).]

Cosm. PAMMECES, Zeller 1863.
Stett. Ent. Ztg. XXIV 152-153, t. 2 ff. 11, 11b : type *albivittella*, Zeller [Venezuela].

Eucosm. PAMMENE, Hübner 1826.
Verz., p. 378 : type *trauniana*, Schiff. [Europe].
|| Strophosoma, H. S. 1853 (*praeocc.*).
|| Strophedra, H. S. 1853.
|| Hemerosia, Stainton 1859.
|| Ephippiphora, Stainton 1859 (nec Dup. 1834).
|| Phthoroblastis, Lederer 1859.
|| Pyrodes, Laderer 1859.
|| Hemimene, Heinrich 1926 (nec Hb.).

Eucosm. Pamplusia, Stainton 1859. (EUCOSMA, Hb.).
Manual II 219 : type [*mercuriana*, Fröl.=] *monticolana*, Gn. [Europe].
Pamplusia, Guenée, Ann. S. E. Fr. (2) III 180 (1845) (*non-descr.*).
Pamplusia, Steph., List Brit. Anim B. M. X 52 (1852) (*non-descr.*).

Tortr. PANAPHELIX, Walsingham 1907.
Faun. Hawaii. I 695-696 : type *marmorata*, Wlsm. [Hawaii].

Schreck. PANCALIA, Curtis 1830.
Brit. Ent. VII, expl. t. 304 : type *leeuwenhoekella*, Linn. [Europe].
Pancalia, Steph., Cat. Brit. Ins. II 209 (1829) (*non-descr.*).

Gel. PANCOENIA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 389 : type *periphora*, M. [N. S. Wales]

Tortr. PANDEMIS, Hübner 1826.
Verz., pp. 388-389 : type *corylana*, Fb. [Europe].

Tortr. PANDURISTA, Meyrick 1918.
Exot. Micr. II 166-167 : type *stictocrossa*, M. [New Guinea].

Gel. PANICOTRICHA, Meyrick 1913.
Ann. Transv. III 296 : type *prographa*, M. [Transvaal].

Eucosm. Panoplia, Hübner 1826. (EUCOSMA, Hb.)
Verz., p. 393 : type *cruciana*, Linn. [Europe].

Aeg. Pansa, Wallengren 1866. (MELITTIA, Hb.)
Kongl. Sv. Ak. Handl. V 9: type *aureosquamata*, Wlgn. [C. & S. Africa].

Crypt. PANSEPTA, Meyrick 1915.
Exot. Micr. I 377: type *teleturga*, M. [New Britain].

Crypt. PANTELAMPRUS, Christoph 1882.
Bull. Mosc. 1882, pp. 21-22: type *staudingeri*, Chr. [Wladiwostok].

Tin. PANTHYTARCHA, Meyrick 1922.
Exot. Micr. II 588-589: type *astrocharis*, M. [Brazil].

Glyph. PANTOSPERMA, Meyrick 1888.
Tr. N. Z. Inst. XX 89: type *holochalca*, M. [New Zealand].

Gel. PAPPOPHORUS, Walsingham 1897.
T. E. S. 1897, 39-40: type *eurynotus*, Wlsm. [W. Africa].

Eucosm. PARABACTRA, Meyrick 1910.
E. M. M. XLVI 72: type *arenosa*, M. [Ceylon].
|| Epibactra, Meyr. 1909 (*praeocc.*).

Eucosm. PARACHANDA, Meyrick 1927.
Exot. Micr. III 338: type *phantastis*, M. [Bolivia].

Oec. PARACHARACTIS, Meyrick 1918.
Exot. Micr. II 215: type *mitosema*, Turner [Queensland].

Gel. PARACHRONISTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 52: type *albiceps*, Zeller [Europe].
|| Poecilia, Heinemann 1870 (*praeocc.*).

Crypt. PARACLADA, Meyrick 1911.
Tr. Linn. Soc. (2) XIV 288: type *tricapna*, M. [Seychelles].

Incurv. PARACLEMENSIA, Busck 1901.
Jl. N. York Ent. Soc. XII 177: type *acerifoliella*, Fitch [N. America].
|| Brackenridgia, Busck 1903 (*praeocc.*).

Tin. PARACLYSTIS, Meyrick 1915.
Exot. Micr. I 293: type *melipecta*, M. [Nyasaland].

Gel. Paradoris, Meyrick 1907. (SYMMOCA, Hb.)
B. J. XVII 740: type *anaphracta*, M. [India].

Aeg. PARADOXECIA, Hampson 1919.
Novit-Zool. XXVI 114: type *gravis*, Wlk. [C. China].

Ypon. Paradoxus, Stainton 1869. (ZELLERIA, Stainton.)
Tin. S. Eur., p. 167, fig. : type *osyridellus*, Stainton [S. Europe; Asia Minor].

Eucosm. Paragrapha, Sodoffsky 1837. (EUCOSMA, Hb.)
Moscou Bull. X, No. 6, p. 93: type *solandriana*, Linn. [Europe].

Gel. Paralechia, Busck 1903. (EXOTELEIA, Wlgn.)
Proc. U. S. Nat. Mus. XXV 820, t. 30 f. 18 : type *pinifoliella*, Chambers [Atlantic States].

Crypt. PARALECTA, Turner 1897.
Ann. Queensl. Mus. IV 25 : type *tinctoria*, Lucas [Queensland].

Lyon. Paraleucoptera, Heinrich 1918. (PROLEUCOPTERA, Busck.)
Proc. E. S. Wash. XX 21 : type *albella*, Chambers [N. America].

Gel. PARALLACTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 246 : type *plaesiodes*, M. [E. Africa].

Scythr. PARALOGISTIS, Meyrick 1913.
Ann. Transv. Mus. III 311-312 : type *ochrura*, M. [Transvaal].

Tin. PARAMERISTIS, Meyrick 1919.
Exot. Micr. II 256-257 : type *eremaea*, M. [Ceylon].

Tortr. Paramesia, Stephens 1834. (PERONEA, Curtis.)
Ill. Brit. Ent., Haust. IV 162 : type *ferrugana*, Tr. [Europe].
Paramesia, Steph., Cat. Brit. Ins. II 187 (1829) (*non-descr.*).

Cosm. PARAMETRIOTES, Kuszenov 1916.
Revue Russe Ent. XV 628, 643, tt. 5-9 : type *theae*, Kusz. [Transcaucasia].

Carp. PARAMORPHA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 696-697 : type *aquilana*, M. [S. E. Australia].

Gel. PARANARSIA, Ragonot 1895.
Bull. S. E. Fr. 1895, 195 : type *joannisiella*, Rag. [S. W. Europe].

Tortr. PARANEPSIA, Turner 1916.
Tr. R. Soc. S. Austr. XL 520 : type *amydra*, Turner [Queensland].

Tin. Paraneura, Dietz 1905. (LINDERA, Blanchard.)
Tr. Amer. E. S. XXXI 12, t. 4 f. 5 : type [*tessellatella*, Blanch.=] *simulella*, Dietz [America ; India ; Australia, etc.].

Gel. PARANOEA, Walsingham 1911.
Biol. Cent. Am., Het. IV 78-79, f. 18 : type *latescens*, Wlsm. [Mexico].

Aeg. PARANTHRENE, Hübner 1820.
Verz., p. 128 : type [*tabaniformis*, Rott.=] *asiliformis*, Schiff. [Europe].
|| Memythrus, Newman 1832.
|| Sciapteron, Staudinger 1854.
|| Tarsa, Wlk. 1856.
|| Pseudosetia, Felder 1861.
|| Tirista, Wlk. 1864.
|| Pramila, Moore 1879.

|| Albuna, Henry-Edwards 1881.
|| Fatua, Hy.-Edw. 1882.
|| Phlogothauma, Butler 1882.
|| Sciopterum, Bartel 1912.
|| Paranthrenella, Strand 1915.

Aeg. Paranthrenella, Strand 1915. (PARANTHRENE, Hb.)
Arch. f. Naturg. LXXXI (A. 8), pp. 47-48 : type *formosicola*, Strand [Formosa].

Aeg. Paranthrenopsis, Le Cerf 1911. (ZENODOXUS, G. & R.)
Bull. Paris Mus. XVII 302 : type *editha*, Butler [Japan].

Elach ? PARAPERITTIA, Rebel 1916.
Verh. z.—b. Ges. Wien LXVI (12)—(14), fig. : type *uniformella*, Rebel [Austria ; S. Russia].
[*Note.*—Unrecognized.]

Tin. PARAPHASIS, Walsingham 1907.
Faun. Hawaii, I 730 : type *perkinsi*, Wlsm. [Hawaii].
[*Note.*—Unrecognized.]

Tortr. PARAPHYAS, Turner 1927.
Proc. R. Soc. Tasmania 1926, pp. 121-122 : type *callixena*, Turner [Tasmania].

Plut. PARAPHYLLIS, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 140 : type *scaeopa*, M. [W. to S. E. Australia].

Tin. Paraplesia, Dietz 1905 (*praeocc.*). (HYPOPLESIA, Busck.)
Tr. Amer. E. S. XXXI 12 : type *busckiella*, Dietz [Arizona].

Tin. PARAPLUTELLA, Rebel 1900.
Iris XIII 163-164 : type *algiricella*, Rebel [Algeria].

Gel. Parapodia, Joannis 1912. (ARISTOTELIA, Hb.)
Bull. S. E. Fr. 1912, 305 : type [*sinaica*, Frauenfeld=] *tamaricicola*, Joannis [France].

Ypon. PARAPRAYS, Rebel 1910.
Iris XXIV 13 : type *punctigera*, Rebel [Fergana].

Gel. PARAPSECTRIS, Meyrick 1911.
Ann. Transv. Mus. II 230 : type *tholaea*, M. [Transvaal].

Tin. PARAPTICA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 15 : type *concinerata*, M. [Cape Colony].

Tortr. PARAPTILA, Meyrick 1912.
T. E. S. 1911, 677 : type *argocosma*, M. [Colombia].

Tortr. Pararrhaptica, Walsingham 1907. (TORTRIX, Linn.)
Faun. Hawaii, I 689 : type *perkinsana*, Wlsm. [Hawaii].

Aeg. Parasa, Wallengren 1863 (*praeocc.*). (MELITTIA, Hb.)
Wien. Ent. Mon. VII 137 : type *aureosquamata*, Wlgn. [C. & S. Africa].

Tortr. PARASELENA, Meyrick 1910.
P. Linn. Soc. N. S W. XXXV 161 : type *thamnas*, M. [Australia].

Aeg. PARASESIA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 322 : type *crystallina*, Le Cerf [Brazil].
Parasesia, Le Cerf, Obth. Et. Lep. comp. XII 11 (1916) (*non-descr.*).

Gel. Parasia, Duponchel 1846. (METZNERIA, Zeller)
Cat. Meth. Lep. Eur., pp. 350-351 : type *neuropterella*, Zeller [C. & S. E. Europe].

Crypt. PARASPASTIS, Meyrick 1915.
Exot. Micr. I 479 : type *circographa*, M. [Brit. Guiana].

Gel. Paraspistes, Meyrick 1905. (BRACHYACMA, Meyr.)
B. J. XVI 600 : type [*palpigera*, Wlsm.] *iolencha*, M. [India; S. Africa; W. Indies, etc.].

Gel. PARASTEGA, Meyrick 1912.
T. E. S. 1911, 693 : type *niveisignella*, Zeller [C. & S. America].

Tortr. PARASTRANGA, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 289 : type *macrogona*, M. [W. Australia].

Gel. Parasymmoca, Rebel 1903. (SYMMOCA, Hb.)
Verh. z.-b. Ges. Wien LIII 114 : type *latiusculella*, Stainton [Asia Minor].

Oec. PARATHETA, Meyrick 1902.
Tr. R. Soc. S. Austr. XXVI 173 : type *syrtica*, M. [E. & S. E. Australia], nec Paratheta, Lower 1899 (*non-descr.*).

Oec. Paratheta, Lower (*non-descr.*). (MIXODETIS, Meyr.)
P. Linn. Soc. N. S. W. XXIV 100-101 (1899) [*non-descr.*] : type *ochrocoma*, Lower.

Cosm. PARATHYSTAS, Meyrick 1913.
Ann. Transv. Mus. III 309 : type *porphyrantha*, M. [Transvaal].
[Query : misprint for *Parathystis*.]

Ypon. Paratiquadra, Walsingham 1897. (URODUS, H. S.)
P. Z. S. 1897, 116 : type *forficulella*, Wlsm. [Jamaica].

Tortr. PARATORNA, Meyrick 1907.
B. J. XVII 980 : type *dorcas*, M. [India].

Plut. PARAXENISTIS, Meyrick 1919.
Exot. Micr. II 225 : type *macrostoma*, M. [S. India].

Ypon. PARAZELOTA, Meyrick 1913.
Ann. Transv. Mus. III 319-320 : type *dryotoma*, M. [Transvaal].

Eucosm. Pardia, Stainton 1858. (EUCOSMA, Hb.)
Manual II 205 : type *tripunctana*, Fb. [Europe to Siberia].
Pardia, Guenée, Ann. S. E. Fr. (2) III 155 (1845) (*non-descr.*).
Pardia, Steph , List Brit. Anim. B. M. X 29 (1852) (*non-descr.*).

Lith. PARECTOPA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 210 : type *lespedezaefoliella*, Clem. [N. America].
|| Euspilopteryx, Zeller 1847 (*nec* Euspilapteryx, Steph. 1835).
|| Macarostola Meyr. 1907.
|| Oecophyllembius, Silvestri 1908.
|| Euspilapteryx, Spuler 1910 (nec Steph. 1835).
|| Micrurapteryx, Spuler 1910.

Gel. PARELECTRA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp.129-130 : type *helicopis*, M. [S. America].

Gel. PARELLIPTIS, Meyrick 1910.
B. J. XX 439 : type *scytalias*, M. [Ceylon].

Ypon. PAREXAULA, Meyrick 1909.
Ann. S. Afr. Mus. V 356 : type *isomima*, M. [Cape Colony].

Aeg. PARHARMONIA, Beutenmuller 1894.
Bull. Amer. Mus. N. H. VI 89 . type *pini*, Kellicott [N. America].
|| Harmonia, Hy.-Edw. 1882 (*praeocc.*).

Eucosm. Parienia, Berg 1899. (EUCOSMA, Hb.)
Comm. Mus. Buen. Aires I 78 : type *mochlophorana*, M. [New Zealand].

Gel. PARISTHMIA, Meyrick 1909.
Ann. Transv. Mus. II 13 : type *barathrodes*, M. [Transvaal].

Tin. PAROCHMASTIS, Meyrick 1917.
Exot. Micr. II 86 : type *styracodes*, M. [Queensland].

Oec. PAROCYSTOLA, Turner 1896.
Tr. R. Soc. S. Austr. XX 30 : type *leucospora*, Turner [Queensland].
|| Gonia, Heinemann 1870 (*praeocc.*).
|| Deuterogonia, Rebel 1901.

Oec. PARODAEA, Meyrick 1914.
Exot. Micr. I 272 : type *scaripheuta*, M. [Nyasaland].

Lith. Parornix, Spuler 1910. (CALLISTO, Stephens.)
Schmett. Eur. II 410 : type *anglicella*, Stainton [Europe].
|| Ornix (nec Tr.), Zeller 1839 et auct.

Schreck. PATANOTIS, Meyrick 1913.
Exot. Micr. I 80: type *harmosta*, M. [Ceylon].

Gel. Patouissa, Walker 1864. (LECITHOCERA, H. S.)
Cat. XXIX 820-821: type *dissonella*, Wlk. [Sarawak].

Tin. PATROMASIA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 347: type *petroglyyta*, M. [S. Africa].

Oec. PATTALODES, Meyrick 1914.
Exot. Micr. I 216: type *brachyota*, M. [W. Australia].

? Patula, Bruand 1847 (*praeocc.*). (?)
Cat. Syst. Microlep. Doubs, p. 84: type [?] *asperipunctella*, Bruand [France].

[*Note.*— Unrecognizable: in any case, *Patula*, Brd. 1847, is a homonym of *Patula*, Held 1837– MOLLUSCA.]

Gel. PAURONEURA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 120: type *brachysticha*, Turner [Queensland].

Ypon. Pauroneura, Turner 1927 (*praeocc.*). (.... ....)
Proc. R. Soc. Tasmania 1926, p. 158: type *acrospila*, Turner [Tasmania].

[*Note.*—This genus has at present no valid name, but Dr. Turner has promised to re name it.]

Oec. PAURONOTA, Lower 1901.
Tr. R. Soc. S. Austr. XXV 95: type *thermaloma*, Lower [N. S. Wales].

Cosm. PAUROPTILA, Meyrick 1913.
Ann. Transv. Mus. III 309: type *galenitis*, M. [Transvaal].

Crypt. PAVOLECHIA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 20-21: type *argentea*, Busck [Panama].

Cosm. PECHYPTILA, Meyrick 1921.
Exot. Micr. II 452: type *rhodocharis*, M. [Queensland].

Gel. Pectinophora, Busck 1917. (PLATYEDRA, Meyr.)
Jl. Agric. Res. IX 346-347, f. 1: type *gossypiella*, Saunders [Tropics and Subtropics].

Oec. Pedois, Turner 1900. (CRYPTOLECHIA, Zeller).
Tr. R. Soc. S. Austr. XXIV 12: type [*lewinella*, Newman =] *neurosticha*, Lower [Australia].

Eucosm. Pelatea, Lederer 1859. (? EUCOSMA, Hb.).
Wien. Ent. Mon. III 330: type *klugiana*, Freyer [S. Europe].
Pelatea, Guenée, Ann. S. E. Fr. (2) III 161 (1845). (*Non-descr.*).

Tin. Pelates, Dietz 1905 (*praeocc.*). (BATHROXENA, Meyr.).
Tr. Amer. Ent. Soc. XXXI 89 : type *heteropalpella*, Dietz. [N. America].

Tin. PELECYSTOLA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. pp. 103-104 : type *decorata*, M. [Brit. E. Africa].

Crypt. PELEOPODA, Zeller 1877.
H. S. E. R. XIII 385-386, t. 5 ff. 131 [a-c] : type *lobitarsis*, Zeller [Panama].

Eucosm. Pelochrista, Lederer 1859. (EUCOSMA, Hb.)
Wien. Ent. Mon. III 331, 337 : type *mancipiana*, Mann [Sardinia ; Corsica].

Oec. PELOMIMAS, Meyrick 1914.
Exot. Micr. I 186 : type *mixadelpha*, M. [Brit. Guiana].

Oec. Peltophora, Meyrick 1884 (*praeocc.*). (CHEZALA, Wlk.).
P. Linn. Soc. N. S. W. IX 722-723 (? 1885) : type *privatella*, Wlk. [E. Australia].
Peltophora, Meyr., P. Linn. Soc. N. S. W. VII 421 (1883) [Invalid ; no associated species].

Oec. PELTOSARIS, Meyrick 1902.
Tr. R. Soc. S. Austr. XXVI 141 : type *triplaca*, M. [N. S. Wales].

Oec. Pempeltias, Kirkaldy 1910. (CHEZALA, Wlk.).
Canad. Ent. XLII 8 : type *privatella*, Wlk. [E. Australia].

Tin. PENESTOGLOSSA, Rogenhofer 1875.
Felder, Reise Novara, Lep. Het., expl. t. 139 : type *dardoinella*, Mill. [S. Europe].
|| Psilothrix, Wocke 1871 (*praeocc.*).

Lith. PENICA, Walsingham 1914.
Biol. Centr. Am. Het. IV 338 : type *peritheta*, Wlsm. [Mexico].

Aeg. Pennisetia, Dehne 1850. (BEMBECIA, Hb.).
Stett. ent. Ztg. XI 28-29 : type [*hylaeiformis*, Lasp.=] *anomala*, Dehne [Europe].

Tortr. Pentacitrotus, Butler 1881. (CERACE, Wlk.).
Ill. Het. V 35 : type *vulnerata*, Butler [N. India].

Eucosm. Penthina, Treitschke 1830. (ARGYROPLOCE, Hb.).
Schmett. Eur. VIII 21 : type [*salicella*, Linn.=] *salicana*, Tr. [Europe].

Ypon. Pepilla, Guenée (*non-descr.*). (PRAYS, Hb.).
Ann. S. E. Fr. (2) III 344 (1845) : type [*curtisellus*, Fb.=] *coenobitella* Hb. [Europe].

Schreck. PERCNARCHA, Meyrick 1915.
T. E. S. 1915, 212 : type *trabeata*, M. [Bolivia].

Oec. PERIACMA, Meyrick 1894.
T. E. S. 1894, 21 : type *ferialis*, M. [Burma].

Oec. PERIALLACTIS, Meyrick 1902.
Tr. R. Soc. S. Austr. XXVI 172-173 : type *monostropha*, Lower. [S. E. Australia].

Oec. Periclita, Turner 1917. (BARANTOLA, Wlk.).
Proc. R. Soc. Queensl. XXIX 100 : type *panarista*, Turner. [Queensland].

Plut. Periclymenobius, Wallengren 1880. (YPSOLOPHUS, Fb.).
Ent. Tidskr. I 61 : type *xylostella*, Linn. [Europe].

Eucosm. PERIDAEDALA, Meyrick 1925.
Exot. Micr. III 139 : type *hierograpta*, M. [New Guinea].

Oec. PERILACHNA, Meyrick 1914.
Exot. Micr. I 230 : type *ixota*, M. [Ceylon].

Cosm. Perimede, Chambers 1874. (MOMPHA, Hb.).
Canad. Ent. VI 51-52 : type *errantella*, Chambers. [N. America].

Gel. PERIORISTICA, Walsingham 1910.
Biol. Centr. Am., Het. IV 31-32, f. 10 : type *chalcopera*, Wlsm. [Mexico].

Oec. PERIORYCTA, Meyrick 1922.
Exot. Micr. II 511-512 : type *stelidias*, M. [Queensland].

Gel. PERIPHORECTIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 235-236 : type *ichorodes*, M. [S. India].

Cosm. PERIPLOCA, Braun 1919.
Entl. News XXX 261 : type *purpuriella*, Braun. [California].

Tin. Perissomastix, Warren 1905. (TINEA, Linn.).
Novit. Zool. XII 33 : type [*othello*, M.=] *nigriceps*, Warren. [Africa ; India ; Ceylon).

Tin. PERISTACTIS, Meyrick 1916.
Exot. Micr. I 602 : type *taraxias*, M. [Ceylon ; India].

Oec. PERITORNEUTA, Meyrick 1900.
Tr. R. Soc. S. Austr. XXIV 13 : type *circulatella*, Wlk. [Queensland].

Tin. PERITRANA, Meyrick 1907.
B. J. XVII 988 : type *distacta*, M. [Ceylon].

Elach. PERITTIA, Stainton 1854.
Brit. Tin., pp. 177-178, t. 6 ff. 3 [a-c] : type *obscurepunctella*, Stainton [W. Europe].

Crypt. PERIXESTIS, Meyrick 1917.
Exot. Micr. II 56 : type *eucephala*, Turner. [Australia].

Tortr. PERONEA, Curtis 1824.
Brit. Ent. I 16 : type *cristana*, Fb. [Europe].
|| Rhyacionia, Hb. 1826.
|| Acleris, Hb. 1826.
|| Lopas, Hb. 1826.
|| Rhacodia, Hb. 1826.
|| Eclectis, Hb. 1826.
|| Teleia, Hb. 1826.
|| Oxigrapha, Hb. 1826.
|| Croesia, Hb. 1826.
|| Teras, Treits 1830.
|| Leptogramma, Curtis 1831.
|| Paramesia, Steph. 1834.
|| Glyphisia, Steph. 1834.
|| Cheimatophila, Steph. 1834.
|| Phloeophila, Dup. 1834.
|| Glyphiptera, Dup. 1834.
|| Phricanthes, Meyr. 1881.
|| Acalla (nec Hb.), Meyr. 1895, Rebel 1901.
|| Polylopha, Lower 1901.
|| Polyortha, Dognin 1905.
|| Colocyttara, Turner 1925.

Cosm. PERSICOPTILA, Meyrick 1886.
T. E. S. 1886, 295 : type *erythrota*, M. [New Hebrides].

Gel. PESSOGRAPTIS, Meyrick 1923.
Exot. Micr. III 29 : type *thalamias*, M. [Brazil].

Oec. PETALANTHES, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 335 : type *sphaerophora*, M. [N. S. Wales].
Petalanthes, Meyr., P. Linn. Soc. N. S. W. VII 421 (1883) [Invalid ; no associated species].

Lyon. PETASACTIS, Meyrick 1915.
Tr. N. Z. Inst. XLVII 234 : type *technica*, M. [New Zealand].

Crypt. PETASANTHES, Meyrick 1925.
Exot. Micr. III 158 : type *leucactis*, M. [Ecuador].

Lyon. PETASOBATHRA, Meyrick 1915.
Exot. Micr. I 355 : type *sirina*, M. [India].

Tortr. PETELIACMA, Meyrick 1912.
Exot. Micr. I 12 : type *torrescens*, M. [Madagascar].

Elach. PETROCHROA, Busck 1914.
Insec. Inscit. Menstr. II 104 : type *swezeyi*, Busck. [Hawaii].

Eucosm. Petrova, Heinrich 1923. (EVETRIA, Hb.).
U. S. Nat. Mus. Bull. 123, p. 21 : type *comstockiana*, Fernald. [Atlantic States].

Tin. PEXICNEMIDIA Möschler 1890.
Ab. Senck. Nat. Ges. XV 337-338 : type *mirella*, Möschler. [Porto Rico].

Carp. Pexinola, Hampson 1900. (MERIDARCHIS, Zeller).
Cat. Lep. Phal. II 79 : type *longirostris*, Hmp. [Tibet].

Tin. PEZETAERA, Meyrick 1921.
Exot. Micr. III 74-75 : type *hoplanthes*, M. [Java].

Eucosm. Phaecadophora, Walsingham 1900. (ARGYROPLOCE, Hb.).
A. M. N. H. (7) VI 130 : type *fimbriata*, Wlsm. [Japan ; Burma ; Assam].

Eucosm. Phaecasiophora, Grote 1873. (ARGYROPLOCE, Hb.).
Bull. Buffalo Soc. I 90 : type [*confixana*, Wlk.=] *mutabilana*, Clemens. [N. America].

Oec. Phaeosaces, Meyrick 1886. (CRYPTOLECHIA, Zeller).
Tr. N. Z. Inst. XVIII 171 : type *apocrypta*, M. [New Zealand].

Lyon. PHAEOSES, Forbes 1922.
Entl. News XXXIII 98-100, t. 5, ff. 1, 2 : type *sabinella*, Forbes. [Louisiana ; Mississippi].

Gel. Phaetusa, Chambers 1875 (*praeocc.*). (EVIPPE, Chambers).
Canad. Ent. VII 105 : type [*leuconota*, Zeller—] *plutella*, Chamb. (U. S. America).

Plut. PHALANGITIS, Meyrick 1907.
P. Linn. Soc. N. S. W. XXXII 136 : type *veterana*, M. [N. S. Wales].

Schreck. PHALARITICA, Meyrick 1913.
Exot. Micr. I 82 : type *vindex*, M. [Ceylon].

Oec. PHALAROTARSA, Meyrick 1924.
Exot. Micr. III 101-102 : type *cirrophaea*, M. [Bolivia].

Glyph. PHALERARCHA, Meyrick 1913.
Exot. Micr. I 100-101 : type *chrysorma*, M. [S. America].

Phal. PHALONIA, Hübner 1826.
Verz., p. 393 : type [*aleella*, Schulze =] *tessellana*, Hb. (Europe to Persia).
|| Dapsilia, Hb. 1826.
|| Cochylis, Treits. 1830.
|| Stenodes, Guenée 1845 (*non-descr.*).
|| Chrosis, Stainton 1859 (Gn. 1845 : *non-descr.*).
|| Argyridia, Stainton 1859.
|| Thyralia, Wlsm. 1897.
|| Aethes, Pierce 1922.
|| Agapete, Pierce 1922.

Coprom. PHANEROCHERSA, Meyrick 1926.
Exot. Micr. III 214 : type *amphignosta*, M. [New Ireland].

Elach. PHANEROCTENA, Turner 1923.
Proc. R. Soc. Victoria XXXVI 75-76 : type *spodopasta*, Turner. [Queensland].

Oec. PHANERODOXA, Meyrick 1921.
Exot. Micr. II 393-394 : type *tubicen*, M. [Brazil ; Peru].

Helioz. PHANEROZELA, Meyrick 1921.
Exot. Micr. II 404 : type *polydora*, M. [Brazil].

Eucosm. Phaneta, Pierce 1922. (EUCOSMA, Hb.).
Genit. Brit. Tortr. p. 70 : type *pauperana*, Dup. [Europe].
Phaneta, Steph., List Brit. Anim. B. M. X 32 (1852) (*non-descr.*).

Gel. PHANOSCHISTA, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, p. 207 : type *meryntis*, M. [S. India].

Gel. PHARANGITIS, Meyrick 1905.
B. J. XVI 597 : type *spathias*, M. [Ceylon].

Phal. Pharmacis Hübner 1823 (*praeocc.*; *non-descr.*) (EUXANTHIS, Hb.).
Zutr. Exot. Schmett. II 10 : type *sartana*, Hb. [U. S. America].

Gel. PHATNOTIS, Meyrick 1913.
B. J. XXII 180 : type *factiosa*, M. [S. India].

Eperm. PHAULERNIS, Meyrick 1895.
Handb., p. 690 : type *dentella*, Linn. [C. Europe].
|| Aechmia (nec Treits.), Stainton 1851, 1859, Wocke 1876.

Coprom. PHAULOPHARA, Turner 1916.
Tr. R. Soc. S. Austr. XL 500 : type *leucogramma*, Turner. [N. Queensland].

Crypt. PHELOTROPA, Meyrick 1915.
Exot. Micr. I 411 : type *ocnodes*, M. [Brit. Guiana].

Aeg. Phemonoe, Henry-Edwards 1882. (SANNINA, Wlk.)
Papilio II 97 : type *uroceriformis*, Wlk. (U. S. America).

Eucosm. Phiaris, Hübner 1826. (ARGYROPLOCE, Hb.).
Verz., p. 381 : type *micana*, Hb. [Europe].

Oec. Phibalocera, Stephens 1834. (CARCINA, Hb.).
Ill. Brit. Ent., Haust. IV 192-193 : type *quercana*, Fb. [Europe ; Asia Minor ; Canada].
Phibalocera, Steph., Cat. Brit. Ins. II 192 (1829) (*non-descr.*).

Elach. Phigalia, Chambers 1875 (*praeocc.*). (ELACHISTA, Tr.).
Canad. Ent. VII 107 : type *albella*, Chambers. [Texas].

Eucosm. Philalcea, Stephens 1835. (ANCYLIS, Hb.).
Ill. Brit. Ent., Haust. IV 396 : type *laetana*, Fb. [Europe].

Oec. PHILAMETRIS, Meyrick 1924.
Exot. Micr. III 102 : type *aethalopa*, M. [Natal].

Gel. PHILARACHNIS, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, p. 217 : type *xerophaga*, M. [India ; Ceylon].

Oec. PHILARGA, Meyrick 1918.
Exot. Micr. II 222 : type *autochlora*, M. [S. India].

Crypt. PHILARISTA, Meyrick 1917.
Exot. Micr. II 54 : type *porphyrinella*, Wlk. [loc. ?].

Plut. PHILAUSTERA, Meyrick 1927.
Exot. Micr. III 358 : type *signigera*, M. [Colombia].

Tortr. PHILEDONE, Hübner 1826.
Verz., p. 389 : type *gerningana*, Schiff. [Europe].

Oec. PHILOBOTA, Meyrick 1881.
P. Linn. Soc. N. S. W. VIII 469 : type *arabella*, Newman. [S. E. Australia].
Philobota, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). [Invalid ; no associated species].

Glyph. PHILOCORISTIS, Meyrick 1927.
Ins. Samoa III 102 : type *catachalca*, M. [Samoa].

Tortr. PHILOCRYPTICA, Meyrick 1923.
Tr. N. Z. Inst. LIV 164 : type *polypodii*, Watt. [New Zealand].

Glyph. PHILODOR·A, Walsingham 1907.
Faun. Hawaii. I 717 : type *succedanea*, Wlsm. [Hawaii].

Lyon. Philodoxa, Gistel (*non-descr.*). (TISCHERIA, Zeller).
.... (1848) (*nom-nud.*) : type *complanella*, Hb. [Europe].

Lyon. PHILONOME, Chambers 1874.
Canad. Ent. VI. 96 : type *clemensella*, Chambers. [U. S. America].
|| Eurynome, Chambers 1875 (*praeocc.*).
|| Busckia, Dyar 1902.
|| Philomone, Meyr. 1915 (*lapsus*).

Oec. Philonympha, Meyrick 1884. (ZACORUS, Butler).
P. Linn. Soc. N. S. W. IX 721 [? 1885] : type *aparthena*, M. [S. E. Australia].
Philonympha, Meyr., P. Linn. Soc. N. S. W. VII 422 (1883). [Invalid ; no associated species].

Gel. PHILOPTILA, Meyrick 1918.
Exot. Micr. II 111 : type *effrenata*, M. [S. India].

Glyph. Philpottia, Meyrick 1916 (*praeocc.*). (CHARIXENA, Meyr.).
Tr. N. Z. Inst. XLVIII 416-417 : type *iridoxa*, M. [New Zealand].

Oec. PHILTRONOMA, Meyrick 1914.
Exot. Micr. I 273 : type *roseicorpus*, Dognin. [Guiana].

Eucosm. Phlaeodes, Stainton 1858. (EUCOSMA, Hb.).
Manual II 207 : type *tetraquetrana*, Hw. [Europe].
Phlaeodes, Guenée, Ann. S. E. Fr. (2) III 172 (1845) (*non-descr.*).
Phlaeodes, Steph., List Brit. Anim. in B. M. X 36 (1852) (*non-descr.*).

Gel. PHLOEOCECIS, Chrétien 1908.
Bull. S. E. Fr. 1908. 91 : type *cherregella*, Chrét. [Algeria].

Gel. PHLOEOGRAPTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 393 : type *macrynta*, M. [Victoria].

Crypt. Phloeophorba, Turner 1897. (ESCHATURA, Meyr.).
Ann. Queensl. Mus. IV 23 : type [*lemurias*, M.=] *codonoptera*, Turner. [Queensland].

Oec. Phloeopola, Meyrick 1883. (BAREA, Wlk.)
P. Linn. Soc. N. S. W. VIII 347 [? 1884] : type *confusella*, Wlk. [Australia ; New Zealand].
Phloeopola, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883), [Invalid ; no associated species].
Phloeopola, Meyr., Tr. N. Z. Inst. XVI 12 (1884) (*described.*)

Tortr. Phloephila, Duponchel 1834. (PERONEA, Curtis).
Ann. S. E. Fr. III 443-444 : type [*literana*, Linn.=] *irrorana*, Hb. [Europe].
Phloiophila, Duponchel, H. N. Lep. Fr. IIX 19 (1834) (*praeocc.*).

Aeg. Phlogothauma, Butler 1882. (PARANTHRENE, Hb.).
A. M. N. H. (5) X 237 : type *scintillans*, Butler [New Britain].

Tin. Phlongia, Walker 1864. (ACROLOPHUS, Poey).
Cat. XXIX 784: type *ferrarenella*, Wlk. [loc.-?].

Oec. PHOLEUTIS, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 49-50: type *neolecta*, M. [E. Australia].
|| Elachypteryx, Turner 1919.

Gel. PHOTODOTIS, Meyrick 1911.
Ann. Transv. Mus. II 229: type *prochalina*, M. [S. & E. Africa].

Eucosm. Phoxopteris, Treitschke 1830. (ANCYLIS, Hb.).
Schmett. Eur. VIII 231: type *siculana*, Hb. [Europe].
Phoxopteris, Treits., Schmett. Eur. VII 232 (1829) (*non-descr.*)
Phoxopteryx, Sodoffsky, Bull. Mosc. X, No. 6, p. 93 (1837) (*emend*).

Oec. PHRATRIODES, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 335-336: type *curvisignis*, M. [Cape Colony].

Ypon. PHREALCIA, Chrétien 1900.
Bull. S. E. Fr. 1900, p. 90: type *brevipalpella*, Chrét., [W. France; Spain].
|| Procalantica, Rebel 1900.

Tortr. Phricanthes, Meyrick 1881. (PERONEA, Curtis).
P. Linn. Soc. N. S. W. VI 636: type *asperana*, M. [E. Australia].

Oec. PHRICONYMA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 340 [? 1884]: type *lucifuga*, M. [N. S. Wales].
Phriconyma, Meyr., P. Linn. Soc. N. S. W. VII 424 (1883) [Invalid; no associated species].

Lith. Phrixosceles, Meyrick 1908. (CUPHODES, Meyr.).
B. J. XVIII 814: type *trochosticha*, M. [India].

Lyon. PHRURIASTIS, Meyrick 1923.
Exot. Micr. III 63-64: type *meliphaga*, M. [Fiji].

Aeg. Phryctena, Oberthür 1881. (ACRIDURA, Butler).
Etudes Ent. VI 114; type *gryllina*, Butler [Brazil.].

Incurv. PHRYGANEOPSIS, Walsingham 1881.
P. Z. S. 1881, 301: type *brunnea*, Wlsm. [California].

Oec. Phryganeutis, Meyrick 1884. (PLEUROTA, Hb.).
P. Linn. Soc. N. S. W. IX 742 [? 1885]: type *cinerea*, M. [S. Australia].

Glyph. Phryganostola, Meyrick 1880. (GLYPHIPTERIX, Hb.).
P. Linn. Soc. N. S. W. V 248-249: type *drosophaes*, M. [E. Australia].

Phal. PHTHEOCHROA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 184 : type *rugosana*, Hb. [Europe].
Phtheochroa, Steph., Cat. Brit. Ins. II 191 (1829) (*non-descr.*).
Phtheochroa, Guenée, Ann. S. E. Fr. (2) III 163 (1845) (*lapsus*).
|| Propira, Durrant 1914.

Lyon. PHTHINOCOLA, Meyrick 1886.
T. E. S. 1886, 291 : type *dochmia*, M. [Tonga].

Eucosm. Phthinolophus, Dyar 1903. (SPILONOTA, Stephens).
Proc. E. S. Wash. V 307 : type *indentana*, Dyar. [N. America].

Elach. PHTHINOSTOMA, Meyrick 1914.
Ann. Transv. Mus. IV 196 : type *infumata*, M. [Transvaal].

Crypt. PHTHONERODES, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 44-45 : type *scotarcha*, M. [S. Australia].
|| Lichenaula, Meyr. 1890.
|| Tymbophora, Meyr. 1890.
|| Clerarcha, Meyr. 1890.
|| Xylorycta, Meyr. 1890.
|| Chalarotona, Meyr. 1890.
|| Illidgea, Turner 1897.
|| Neodrepta, Turner 1897.

Gel. PHTHORACMA, Meyrick 1921.
Ann. Transv. Mus. VIII 87 : type *blanda*, M. [Transvaal].

Gel. PHTHORIMAEA, Meyrick 1902.
E. M. M. XXXVIII 103-104 : type *operculella*, Z. [in all warm Regions].
Phthorimoea, Forbes, Lep. N. York, p. 276 (1924) (*lapsus*).
|| Lita (nec Treits.), Heinemann 1870, Rebel 1901, Spuler 1910.

Eucosm. Phthoroblastis, Lederer 1859. (PAMMENE, Hb.).
Wien. Ent. Mon. III 370-371, t. 2 f. 12 : type [*populana*, Fb.=] *ephippana*, Hb. [Europe].

Tin. PHTHOROPOEA, Walsingham 1896.
P. Z. S. 1896, 282 : type *carpella*, Wlsm. [Aden].

Tin. Phycia, Oken 1815. (SCARDIA, Treits.).
Lehrbuch der Naturgeschichte III, i, 654 : type *boletella*, Fb. [Europe].

[NOTE.—Oken himself quotes the name as "*Phycia, Phycis*." It is obvious that *Phycia*, Oken, is a mere variation of *Phycis*, Fb. 1798, and cannot be considered as a valid neonym.]

Tin. Phyciodyta, Meyrick 1918. (XYLESTHIA, Clemens).
Ann. Transv. Mus. VI 58 : type *neritis*, M. [Cape Colony].

Tin. Phycis, Fabricius 1798 (*praeocc.*). (SCARDIA, Treits.).
Suppl. Ent. Syst. pp. 420, 463-464 : type [*boletella*, Fb.=] *boleti*, Ochs. nec Fb. [Europe].

NOTE.—Praeoccupied by *Phycis*, Walbaum. Petri Artedi Genera Piscium. Ichthyologiæ Pars III, pp. 575-576 (1792) (PISCES).

Glyph. PHYCODES, Guenée 1852.
Spec. Gen., Noct. II 389 : type *radiata*, Ochs. [India ; Ceylon].
|| Chimaera, Ochsenheimer 1808 (*praeocc.*).
|| Nigilgia, Wlk. 1863.
|| Tegna, Wlk. 1866.

Coprom. PHYCOMORPHA, Meyrick 1914.
Tr. N. Z. Inst. XLVI 106 : type *metachrysa*, M. [New Zealand].

Tin. Phygas, Treitschke 1833. (OCHSENHEIMERIA, Hb.)
Schmett. Eur. IX, ii, 73 : type *taurella*, Schiff. [Europe].

Plut. PHYLACODES, Meyrick 1905.
T. E. S. 1905, 241-242 : type *cauta*, M. [New Zealand].

Tortr. Phylacteritis, Meyrick 1922. (PLATYNOTA, Clemens).
Exot. Micr. II 499 : type *dioptrica*, M. [Ontario].

Lyon. PHYLLOBROSTIS, Staudinger 1859.
Stett. Ent. Ztg. XX 257 : type *daphneella*, Stdgr. [S. W. Europe].
|| Pilotocoma, Meyr. 1913.

Lith. PHYLLOCNISTIS, Zeller 1848.
Linn. Ent. III 264-266, t. 2, ff. 31-34 : type *suffusella*, Zeller. [Europe].

Lith. Phyllonorycter, Ely 1918. (LITHOCOLLETIS, Hb.).
Proc. E. S. Wash. XIX 38 : type *rajella*, Linn. (Europe).
Phyllonorycter, Hb., Tentamen, p. 2 (1806) (*non-descr.*) : type " *rajella*."
Phyllonorycter, Wlsm., P. Z. S. 1907, 976 (1908) (*non-descr.*).
Phyllorycter, Wlsm., Biol. Centr. Am., Het. IV 336-337 (1914) (*non-descr.*).

Oec. PHYLLOPHANES, Turner 1896.
Tr. R. Soc. S. Austr. XX 21 : type *dyseureta*, Turner. [Queensland].

Incurv. PHYLLOPORIA, Heinemann 1870.
Kleinschmett. Deuts. II i, 57-58 : type *bistrigella*, Hw. [Europe].

Crypt. PHYLOMICTIS, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 74-75 : type *maligna*, M. (Victoria).
|| Comoscotopa, Lower 1902.

Gel. PHYLOPATRIS, Meyrick 1923.
Exot. Micr. III 14 : type *terpnodes*, M. [Brazil ; Peru].

Physopt. PHYSOPTILA, Meyrick 1914.
B. J. XXII 777 : type *scenica*, M. [S. India].

Oec. PHYTOMIMIA, Walsingham 1912.
Biol. Centr. Am., Het. IV 133 (1912) : type *chlorophylla*, Wlsm. [C. America].

Oec. Phyzanica, Turner 1917. (EUTORNA, Meyr.)
Tr. R. Soc. S. Austr. XLI 117 : type [*pelogenes*, M.=] *tapinota*, Turner. [Queensland].

Glyph. PICRODOXA, Meyrick 1923.
Exot. Micr. II 617 : type *harpodes*, M. [S. India].

Oec. PICROGENES, Meyrick 1917.
Ann. S. Afr. Mus. XVII 6 : type *bactrospila*, M. [Cape Colony].

Carp. PICRORRHYNCHA, Meyrick 1922.
Exot. Micr. II 550 : type *scaphula*, M. [Khasis].

Tin. PICROSPORA, Meyrick 1912.
Ann. S. Afr. Mus. X 69 : type *araea*, M. [S. Africa].

Oec. PICROTECHNA, Meyrick 1914.
Exot. Micr. I 260 : type *ophiodora*, M. [India].

Chlid. PICROXENA, Meyrick 1921.
Zool. Meded. VI 160 : type *scorpiura*, M. [Java].

Glyph. PIESTOCEROS, Meyrick 1907.
P. Linn. Soc. N. S. W. XXII 94 : type *conjunctella*, Wlk. [E. Australia].

Blast. PIGRITIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 172-173 : type *laticapitella*, Clem. [Atlantic States].
|| Dryope, Chambers 1874 (*praeocc.*).
|| Epigritia, Dietz 1900.
|| Dryoperia, Coolidge 1909.
|| Americides, Kirkaldy 1910.

Tin. Pilanophora, Walsingham 1897. (ACROLOPHUS, Poey).
P. Z. S. 1897, 171 : type *hedemanni*, Wlsm. [W. Indies].

Gel. PILOCRATES, Meyrick 1920.
Exot. Micr. II 299 : type *prograpta*, M. [S. India].

Oec. PILOPREPES, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 365 [? 1884] : type *aemulella*, Wlk. [Queensland].
Piloprepes, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883). [Invalid ; no associated species].
|| Copriodes, Turner 1916.

Crypt. Pilostibes, Meyrick 1890. (CRYPTOPHASA, MacLeay).
Tr. R. Soc. S. Austr. XIV 26 : type *enchidias*, M. [N. S. Wales].

Lyon. Pilotocoma, Meyrick 1913. (PHYLLOBROSTIS, Stdgr.).
Ann. Transv. Mus. III 331 : type *tephroleuca*, M. [Transvaal].

Oec. Pinaris, Hübner 1826. (DEPRESSARIA, Hw.).
Verz., p. 411 : type *arenella*, Schiff. [Europe].
Pinaris, Hb., Zutr. Exot. Schmett. III 14-15 (1825) (*non-descr.*).

Glyph. Pingrasa, Walker 1858. (IMMA, Wlk.).
Cat. XVI 226 : type *accuralis*, Wlk. [Ceylon].

Plut. PISINIDEA, Butler 1883.
T. E. S. 1883, 83 : type *viridis*, Butler. [Chile].

Lyon. PISISTRATA, Meyrick 1924.
Exot. Micr. III 81 : type *trypheropa*, M. [Samoa].

Glyph Pitane, Walker 1854. (CEBYSA, Wlk.).
Cat. II 531-532 : type [*leucotelus*, Wlk.=] *dilecta*, Wlk. [E. Australia].

Gel. PITHANURGA, Meyrick 1921.
Ann. Transv. Mus. VIII 68 : type *chariphila*, M. [Transvaal].

Tin. Pitharcha, Meyrick 1908. (HAPSIFERA, Zeller).
P. Z. S. 1908 751 : type *chalinaea*, M. [S. Africa].

Gel. PITYOCONA, Meyrick 1918.
Exot. Micr. II 116 : type *xeropis*, M. [India ; Ceylon ; Java].

Tin. Pitys, Chambers 1873 (*praeocc.*). (HOMOSETIA, Clemens).
Canad. Entom. V 110 : type *tricingulatella*, Clem. [N. America].

Gel. PLACANTHES, Meyrick 1923.
Exot. Mia. III 42 : type *xanthomorpha*, M. [Philippines].

Oec. PLACOCOSMA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 332 [? 1884] : type *resumptella*, Wlk. [N. S. Wales].
Placocosma, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species].

Tin. PLACODOMA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 365, f. 10 : type *oasella*, Chrét. [Algeria].

Schreck. PLACOPTILA, Meyrick 1894.
• T. E. S. 1894, 23 : type *electrica*, M. [Burma].

Schreck. Placostola, Meyrick 1887. (STATHMOPODA, H. S.).
T. E. S. 1887, 280 : type *diplaspis*, M. [Aden].

Tin. PLAESIOSTOLA, Meyrick 1926.
Sarawak Mus. Jl. III 168 : type *diaplintha*, M. [Borneo].

Tortr. PLANOSTOCHA, Meyrick 1912.
Exot. Micr. I 13 : type *cumulata*, M. [India ; Ceylon].

Oec. PLASMATICA, Meyrick 1914.
Exot. Micr. I 270 : type *sternitis*, M. [Nyasaland].

Lyon. PLATACMAEA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. pp. 96-97 : type *cretiseca*, M. [Brit. E. Africa].

Oec. PLATACTIS, Meyrick 1911.
Tr. Linn. Soc. (2) XIV 287 : type *hormathota*, M. [Seychelles].

Cosm. PLATYBATHRA, Meyrick 1911.
Ann. Transv. Mus. III 78 : type *ganota*, M. [Transvaal].

Gel. PLATYEDRA, Meyrick 1895.
Handb., p. 605 : type *vilella*, Zeller. [Europe ; N. Africa ; W. C. Asia].
|| Pectinophora, Busck 1917.

Tortr. PLATYNOTA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 347-348 : type [*idaeusalis*, Wlk.=] *sentana*, Clem. [N. America].
|| Cerorrhincta, Zeller 1877.
|| Phylacteritis, Meyr. 1922.

Eucosm. Platypeplus, Walsingham 1887. (ARGYROPLOCE, Hb.).
Moore's Lep. Ceylon III 495 : type *aprobola*, M. [India ; Ceylon].
Platypeplum, Wlsm., Ind. Mus. Notes IV 105 (1899) (*emend.*).

Aluc. PLATYPTILIA, Hübner 1826.
Verz., p. 429 : type *gonodactyla*, Schiff. [Europe].
|| Amblyptilia, Hb. 1826.
|| Cnaemidophorus, Wlgn. 1859 [? 1862] (*praeocc.*).
|| Eucnaemidophorus, Wlgn. 1881.
|| Mariana, Tutt 1906.
|| Fredericina. Tutt 1906.
|| Gillmeria, Tutt 1906.
|| Platyptiliodes, Strand 1912.
|| Platyptilus, Zeller (*emend.*).

Aluc. Platyptiliodes, Strand 1912. (PLATYPTILIA, Hb.).
Arch. f. Naturg. 1912 (A. 12), p. 65: type *albisignatula*, Strand. [Spanish Guinea].

Tin. PLATYSCEPTRA, Meyrick 1916.
Exot. Micr. I 605: type *aestuans*, M. [S. India].

Crypt. PLECTOPHILA, Meyrick 1980.
Tr. R. Soc. S. Austr. XIII 54-55: type *electella*, Wlk. [Australia].

Gel. PLECTROCOSMA, Meyrick 1921.
Ann. Transv. Mus. VIII 75: type *centrophora*, M. [Transvaal].

Lyon. PLEMYRISTIS, Meyrick 1915.
Exot. Micr. I 369: type *aphrochroa*, M. [Assam].

Oec. PLESIOSTICHA, Meyrick 1921.
Ann. Transv. Mus. VIII 100: type *galactaea*, M. [Transvaal].

Oec. PLEUROTA, Hübner 1826.
Verz., p. 406: type *bicostella*, Clerck [Europe; W. C. Asia: N. Africa].
|| Eupleuris, Hb. 1826.
|| Macrochila, Steph. 1834.
|| Palpula, Dup. 1838 (nec Treits. 1833).
|| Holoscolia, Zeller 1839.
|| Protasis, H. S. 1853.
|| Thema, Wlk. 1864.
|| Phryganeutis, Meyr. 1884.

Ypon. PLEXIPPICA, Meyrick 1912.
Ann. S. Afr. Mus. X 67: type *verberata*, M. [Bechuanaland].

Ypon. PLINIACA, Busck 1907.
Proc. E. S. Wash. VIII 87-88: type *bakerella*, Busck. [California].

Oec. PLOCAMOSARIS, Meyrick 1912.
T. E. S. 1911, 706: type *pandora*, M. [Brazil].

Blast. Ploiophora, Dietz. 1900. (BLASTOBASIS, Zeller).
Tr. Am. E. S. XXVII 102, t. 6 f. 2: type *fidella*, Dietz. [Pennsylvania].
Ploeophora, Wlsm. & Drt., E. M. M. XLV 47 (1909) (*emend.*).

Tin. PLUMANA, Busck 1911.
Proc. U. S. Nat. Mus. XL. 229-230: type *piperatella*, Busck. [French Guiana].

Plut. PLUTELLA, Schrank 1802.
Fauna Boica II, ii, 169: type [*maculipennis*, Curtis=] *xylostella*, Schr. nec Linn. [Cosmopolitan].
|| Anadetia, Hb. 1826.
|| Euota, Hb. 1826.

|| Creagria, Sodoffsky 1837.
|| Caunaca, Wlgn. 1880.

Plut. Plutelloptera, Chambers 1880. (YPSOLOPHUS, Fb.).
Jl. Cinc. Soc. Nat. Hist. II 181 : type *radiatella*, Don. [Europe].

Aeg. Poderis, Boisduval (*nom-nud*). (MELITTIA, Hb.).
Hist. Nat. Lep. Het. I 468 (1875) : type ......

[NOTE.—A mere M S. name, without any description or type, and cited by Boisduval himself as a synonym of *Melittia* It has been quoted as a synonym of *Podosesia* by dalla Torre and Strand without any justification.]

Ypon. PODIASA, Busck 1900.
Proc. U. S. Nat. Mus. XXIII 240, t. 1 f. 12 : type *chiococcella*, Busck. [Florida].

Aeg. PODOSESIA, Moschler 1879.
Stett. Ent. Zts. XL 246 : type *syringae*, Harris [N. America].
|| Grotea, Moschler 1876 (*praeocc.*).

Gel. Poecilia, Heinemann 1870 (*praeocc.*). (PARACHRONISTIS, Meyr.) ;
Kleinschmett. Deuts. II, i, 281 : type *albiceps*, Zeller [Europe].

Eucosm. Poecilochroma, Stephens 1834. (EUCOSMA, Hb.).
Ill. Brit. Ent. Haust. IV 138 : type *solandriana*, Linn. [Europe ; N. America].
Poecilochroma, Steph., Cat. Brit. Ins. II 183 (1829) (*non-descr.*).

Ypon. Poeciloptera, Clemens 1860. (ATTEVA, Wlk.).
Proc. Acad. Nat. Sci. Philad. XII 546 : type *aurea*, Fitch [N. America].

Lith. Poeciloptilia, Hübner 1826. (CALOPTILIA, Hb.).
Verz., p. 427 : type *falconipennella*, Hb. [Europe].

Gel. POGOCHAETIA, Staudinger 1880.
H. S. E. R. XV 310 : type *solitaria*, Stdgr. [Asia Minor].

Eucosm. Pogonozada, Hampson 1905. (ARGYROPLOCE, Hb.).
A. M. N. H. (7) XVI 586 : type *illepida*, Butler. [India ; Hawaii ; Australia].

Tortr. POLEMOGRAPTIS, Meyrick 1910.
T. E. S. 1910, 432 : type *miltocosma*, M. [Borneo].

Eucosm. POLYCHROSIS, Ragonot 1894.
Ann. S. E. Fr. LXIII 209 : type *botrana*, Schiff. [Europe].
|| Chrosis (nec Stt.), Led. 1859, Hein. 1863, Snell. 1882, Meyr. 1895.
|| Syntozyga, Lower 1901.
|| Byrsoptera, Lower 1901.
|| Ahmosia, Heinrich 1926.

Oec. POLYEUCTA, Turner 1917.
Tr. R. Soc. S. Austr. XLI 104 : type *callimorpha*, Lower [Queensland].

Gel. POLYHYMNO, Chambers 1874.
Canad. Entom. VI 246 : type *luteostrigella*, Chamb. [S. Atlantic States].
|| Copocercia, Zeller 1877.

Tortr. Polylopha, Lower 1901. (PERONEA, Curtis).
Tr. R. Soc. S. Austr. XXV 71 : type *epidesma*, Lower [Queensland : India].

Elach. POLYMETIS, Walsingham 1908.
P. Z. S. 1907, 969 : type *carlinella*, Wlsm. [Tenerife].

Tin. POLYMNESTRA, Meyrick 1927.
Exot. Micr. III 331 : type *perilithias*, M. [Transvaal].

? POLYNESA, Turner 1898.
Tr. R. Soc. S. Austr. XXII 201 : type *maculosa*, Turner [Queensland].
[Unrecognized].

Tortr. Polyortha, Dognin 1905. (PERONEA, Curtis).
Ann. S. E. Belg. XLIX 85-86 : type *niveipunctata*, Dognin [C. & S. America].

Glyph. Polyphlebia, Felder 1874. (SAGALASSA, Wlk.).
Reise Novara, Lep. Het., t. 102 f. 38, Erkl. Taf. 75-107 (Het.), p. 8 : type [*buprestoides*, Wlk.=]. *atychioides*, Felder [S. America].

Glyph. Polyploca, Wallengren 1861 (*praeocc.*). (CEBYSA, Wlk.).
Resa Eugenies, Ins. p. 384 : type *leucotelus*, Wlk. (E. Australia].

Oec. Polypseustis, Dognin 1908. (ARCTOPODA, Butler).
Ann. S. E. Belg. LII 33 : type [*maculosa*, Butl.=] *cuprea*, Dogn. [Chile].

Tin. POMPOSTOLA, Meyrick 1927.
Exot. Micr. III 325-326 : type *charipepla*, M. [Bermuda].

Lyon. PONTODRYAS, Meyrick 1920.
Exot. Micr. II 362 : type *loxosema*, M. [Fiji].

Eupist. POROTICA, Meyrick 1913.
Ann. Transv. Mus. III 324 : type *astragalis*, M. [Transvaal].

Glyph. Porpe, Hübner 1826. (CHOREUTIS, Hb.).
Verz., p. 373 : type [*bjerkandrella*, Thnb.=] *fibrana*, Hb. [Europe ; India, etc.].

Lith. Porphyrosela, Braun 1908. (LITHOCOLLETIS, Hb.).
Tr. Amer. E. S. XXXIV 348 : type *desmodiella*, Clemens [N. America].

Gel. PORPODRYAS, Meyrick 1920.
Exot. Micr. II 304-305 : type *prasinantha*, M. [French Guiana].

Eupist. Porrectaria, Haworth 1828. (EUPISTA, Hb.).
Lep. Brit., p. 533 : type [*anatipennella*, Hb.=] *anatipennis*, Hw. [Europe].

Aluc. Porrittia, Tutt. (*non-descr.*). (ALUCITA, Linn.).
Ent. Rec. XVII 37 (1905) (*nom. nud.*) : type *galactodactyla*, Hb. [Europe].

.. PORSICA, Walker 1866.
Cat. XXXV 1823 : type *ingens*, Wlk. [Assam].
[NOTE.—Probably not a Micro. ; apparently a Notodontid.]

Oec. PORTHMOLOGA, Meyrick 1914.
Exot. Micr. I 260 : type *paraclina*, M. [India].

Crypt. POTNIARCHA, Meyrick 1917.
Exot. Micr. II 56 : type *hierastis*, M. [W. Australia].

Gel. PRAGMATODES, Walsingham 1908.
P. Z. S. 1907, 928-929 : type *fruticosella*, Wlsm. [Canary Isds.].

Aeg. Pramila, Moore 1879. (PARANTHRENE, Hb.).
Lep. Atk., p. 9 : type *atkinsoni*, Moore. [Sikkim].

Gel. PRASODRYAS, Meyrick 1926.
Exot. Micr. III 287-288 : type *fracticostella*, Wlsm. [Gold Coast].

Crypt. Prasolithhites, Meyrick 1912. (STENOMA, Zeller).
T. E. S. 1911, 707 : type *virens*, M. [Colombia].

Ypon. PRAYS, Hübner 1826.
Verz., p. 413 : type [*curtisellus*, Don.=] *coenobitella*, Hb. [Europe].
|| Pepilla, Guenée 1845 (*non-descr.*).

Aeg. PREMELITTIA, Le Cerf 1917.
Obth., Et. Lep. comp. XIV 234 : type *rufescens*, Le Cerf. [Bolivia].
Premelittia, Le Cerf. Obth. Et. Lep. comp. XII 9 (1916) (*non-descr.*).

Tin. PRINGLEOPHAGA, Enderlein 1906.
Zool. Anzeig. XXIX 120 : type *kerguelensis*, End. [Kerguelen].

Gel. Proactica, Walsingham 1904. (APATETRIS, Stdgr.).
E. M. M. XL 268 : type *halimilignella*, Wlsm. [Algeria].

Aeg. PROAEGERIA, Le Cerf 1917.
Obth., Et. Lep. comp. XIV 275 : type *vouauxi*, Le Cerf. [Cameroons].

Tin. PROBATOSTOLA, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 344: type *ochromella*, Meyr. [S. W. Africa].

Lyon. PROBLASTODES, Meyrick 1928.
Exot. Micr. III 399-400: type *ensifera*, M. [Seychelles].

Ypon. PROBOLACMA, Meyrick 1927.
Exot. Micr. III 362: type *melanoclista*, M. [Texas].

Lyon. PROBOLOPTILA, Meyrick 1921.
Zool. Meded. VI 195: type *frontella*, Wlsm. 1897. [W. Indies].

Ypon. Procalantica, Rebel 1900. (PHREALCIA, Chrétien).
Iris. XIII 162: type *ussuriensis*, Rebel [Ussuri].

Tortr. PROCALYPTIS, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 204: type *oncota*, M. [W. Australia].

Oec. PROCELEUSTIS, Meyrick 1914.
Exot. Micr. I 267-268: type *paraphracta*, M. [Transvaal].

Gel. PROCHARISTA, Meyrick 1922.
Zool. Meded. VII 82-83: type *sardonias*, M. [Java].

Cosm. PROCHOLA, Meyrick 1915.
Exot. Micr. I 331: type *oppidana*, M. [Brit. Guiana].

Gel. Proclesis, Walsingham 1911. (DEOCLANA, Busck).
Biol. Centr. Am., Het. IV 83, f. 20: type *xanthoselene*, Wlsm. [C. & S. America].

Crypt. PROCOMETIS, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 71: type *lipara*, M. [E. Australia].
|| Hyostola, Meyr. 1908.

Eucosm. PROCORONIS, Meyrick 1911.
P. Linn. Soc. N. S. W. XXXVI 250: type *rhothias*, M. [Solomons to Moluccas].

Tin. PROCTOLOPHA, Rebel 1915.
Abh. z.-b. Ges. Wien LXV (56)-(59), ff. 2-4: type *parnassiella*, Rebel (Greece).
[Not recognized].

Tortr. PRODIDACTIS, Meyrick 1921.
Ann. Transv. Mus. VIII 52: type *mystica*, M. [Natal].

Gel. PRODOSIARCHA, Meyrick 1904.
P. Linn. Soc. N.S.W. XXIX 330: type *loxodesma*, M. [S. Australia].

Incurv. Prodoxus, Riley 1880. (TEGETICULA, Zeller).
Amer. Ent. III 141-145, 155-156: type *quinquepunctella*, Chambers [South Atlantic States].

Tin. Progona, Dietz 1905 (*praeocc.*) (MEA, Busck).
Tr. Am. Ent. Soc. XXXI 76, t. 6 f. 1 : type *skinnerella*, Dietz [New Jersey].

Tin. Progonarma, Meyrick 1911. (ARCHYALA, Meyr.).
Tr. Linn. Soc. (2) XIV 302-303 : type *pagetodes*, M. [Seychelles ; Cargados).

Lyon. PROLEUCOPTERA, Busck 1902.
Jl. New York Ent. Soc. X 98-99 : type *smilaciella*, Busck [U. S. America].
|| Paraleucoptera, Heinrich 1918.

Oec. PROMALACTIS, Meyrick 1908.
B. J. XVIII 806 : type *holozona*, M. [S. India].

Tin. Promasia, Chrétien 1905. (MYRMECOZELA, Zeller).
Naturaliste 1905, p. 257 : type *ataxella*, Chrét.

Crypt. PROMENESTA, Busck 1911.
Proc. U. S. Nat. Mus. XLVII 21-22 : type *lithochroma*, Busck [Panama].

Gel. PROMOLOPICA, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, pp. 118-119 : type *epiphanta*, M. [Brazil].
[*Note.*—Not valid before February 1926, when its type was described in *Exotic Microlepidoptera.*]

Ypon PRONOMEUTA, Meyrick 1905.
B. J. XVI 608 : type *sarcopis*, M. [Ceylon : S. India].

Incurv. Pronuba, Riley 1872 (*praeocc.*) (TEGETICULA, Zeller).
Nature VI 444 : type *yuccasella*, Riley [South Atlantic States].

Carp. Propedesis, Walsingham 1900 (MERIDARCHIS, Zeller).
A. M. N. H. (7) VI 122 : type *excisa*, Wlsm. [Japan].

Gel. PROPHORAULA, Meyrick 1922.
T. E. S. 1922 105 : type *pyrrhopis*, M. [Brazil].

Helioz. PROPHYLACTIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 408 : type *argochalca*. M. [W. Australia].

Phal. Propira, Durrant 1914. (PHTHEOCHROA, Stephens).
Biol. Centr. Am., Het. IV 297 : type *schreibersiana*, Frölich [Europe].

Oec. Prosarotra, Meyrick 1909. (CRYPTOLECHIA, Zeller).
Ann. Transv. Mus. II 23 : type *agenopis*, M. [S. Africa].

Eucosm. PROSCHISTIS, Meyrick 1907.
B. J. XVII 731 : type *zaleuta*, M. [Ceylon ; S. India].
|| Asaphistis, Meyr. 1909.

Tortr. PROSELENA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 421 : type *annosana*, M. [S. E. Australia].
|| Prothelymna, Meyr. 1883.

Gel. PROSELOTIS, Meyrick 1914.
Exot. Micr. I 276 : type *sceletodes*, M. [Nyasaland].
|| Idiobela, Turner 1919.

Blast. PROSINTIS, Meyrick 1916.
Exot. Micr. I 598 : type *florivora*, M. [India : Ceylon].

Gel. PROSODARMA, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, p. 244 : type *fibularis*, M. [Java; Celebes].

Blast. Prosodica, Walsingham 1907. (HOLCOCERA, Clemens).
Proc. U. S. Nat. Mus. XXXIII 200 : type *nephalia*, Wlsm. [C. America].

Gel. Prosomura, Turner 1919. (AUTOSTICHA, Meyr.).
Proc. R. Soc. Queensl. XXXI 147 : type *symmetra*, Turner [Queensland].

Tin. PROSPLOCAMIS, Meyrick 1919.
Exot. Micr. II 256 : type *apracta*, M. [Burma].

Blast. Prosthesis, Walsingham 1908. (BLASTOBASIS, Zeller).
P. Z. S. 1907, 953 : type *exclusa*, Wlsm. [Tenerife].

Gel. PROSTOMEUS, Busck 1903.
Proc. U. S. Nat. Mus. XXV 837-838, t. 31 f. 25 : type *brunneus*, Busck [Florida].

Schreck. PROTANYSTIS, Meyrick 1921.
Zool. Meded. VI 177 : type *chalybastra*, M. [Java].

Tin. PROTAPHREUTIS, Meyrick 1922.
Exot. Micr. II 593 : type *acquisitella*, Wlk. [Réunion].

Oec. Protasis, Herrich—Schäffer 1853. (PLEUROTA, Hb.).
Schmett. Eur. V 40, t. 12 ff. 21, 22 : type *punctella*, Costa [Europe].

Oec. PROTEODES, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 492-493 : type *carnifex*, Butler [New Zealand].
Proteodes, Meyr. P. Linn. Soc. N. S. W. VII 424 (1883). [Invalid; no associated species].

Eucosm. Proteopteryx, Walsingham 1879. (EUCOSMA, Hb.).
Ill. Het. IV 68 : type *emarginana*, Wlsm. [California].

Eucosm. PROTEOTERAS, Riley 1881.
Trans. St. Louis Acad. Sci. IV 321 : type *aesculanum*, Riley [U. S America].

Elach. PROTEROCHYTA, Meyrick 1918.
Ann. Transv. Mus. VI 56 : type *epicoena*, M. [Transvaal].

Cosm. PROTEROCOSMA, Meyrick 1886.
T. E. S. 1886, 293 : type *triplanetis*, M. [Tonga].

Tin. PROTERODESMA, Meyrick 1909.
Subantarct. Isds. of New Zealand, p. 74 : type *byrsopola*. M. [Auckland Isd.].

Oec. Proteromicta, Meyrick 1888. (BORKHAUSENIA, Hb.).
P. Linn. Soc. N. S. W. XIII 1669 : type *crymorrhoa*, M. [S. Australia ; Tasmania].

Crypt. PROTHAMNODES, Meyrick 1923.
Exot. Micr. II 613 : type *platycycla*, M. [Burma].

Tortr. Prothelymna, Meyrick 1882. (PROSELENA, Meyr.).
N. Zeal Jl. Sci. I 277-278 : type [*antiquana*, Wlk.=] *nephelotana*, M. [New Zealand].

Tin. PROTHINODES, Meyrick 1914.
Tr. N. Z. Inst. XLVI 116 : type *lutata*, M. [New Zealand].

Eucosm. Protithona, Meyrick 1882. (EUCOSMA, Hb.).
N. Zeal. Jl. Sci. I 278 : type *fugitivana*, M. [New Zealand].

Gel. PROTOBATHRA, Meyrick 1916.
Exot. Micr. I 595 : type *crista*, M. [S. India].

Oec. PROTOGRYPA, Meyrick 1914.
Exot. Micr. I 233 : type *citromicta*, M. [Ceylon].

Gel. PROTOLECHIA, Meyrick 1903.
E. M. M. XXXIX 291 : type *mesochra*. Lower [E. Australia].

Gel. PROTOLYCHNIS, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, p. 242 : type *maculata*, Wlsm. [C. & S. Africa].

Oec. PROTOMACHA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 739 [? 1885] : type *chalcaspis*, M. [S. E. Australia].
Protomacha, Meyr., P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid ; no associated species].

Oec. PROTONOSTOMA, Meyrick 1910.
B. J. XX 167 : type *aethopa*, M. [Assam].

Tortr. PROTOPTERNA, Meyrick 1908.
B. J. XVIII 621 : type *chalybias*, M. [India].

Plut. PROTOSYNAEMA, Meyrick 1886.
Tr. N. Z. Inst. XVIII 173-174 : type *eratopis*, M. [New Zealand].

Prototh. PROTOTHEORA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 18 : type *petrosema*, M. [Cape Colony].

Crypt. PROTRACHYNTIS, Myrick 1917.
Exot. Micr. II 55 : type *hospita*, Felder [New Guinea : N. Australia].
Antaeotricha [nec Zeller], Meyr. T. E. S. 1886. 282-283 (1886).

Tin. Proxerantis, Meyr. M. S. (*ined.*) (MYRMECOZELA, Zeller).
[A M. S. generic name for *leontina*, M., from India].

Lyon. PRYTANEUTIS, Meyrick 1911.
B. J. XXI 109 : type *clavigera*, M. [Ceylon].

Cosm. Psacaphora, Herrich-Schäffer 1853. (MOMPHA, Hb.).
Schmett. Eur. V 48-49, t. 13 ff. 22-24 : type *schrankella*, Hb. [Europe].

Oec. PSALTICA, Meyrick 1905.
B. J. XVI 604 : type *monochorda*, M. [Ceylon].

Oec. PSALTRIODES, Meyrick 1902.
Tr. R. Soc. S. Austr. XXVI 137-138 : type *thriambis*, M. (Queensland].

Gel. PSAMATHOCRITA, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, p. 40 ; type *osseella*, Stt. [C. & S. Europe ; Algeria].

Gel. PSAMMORIS, Meyrick 1906.
B. J. XVII 149 : type *carpaea*, M. [Ceylon].

Ypon. Psecadia, Hübner 1826. (ETHMIA, Hb.).
Verz., p. 412 : type *decemguttella*, Hb. [C. & S. Europe].

Tin. Psecadioides, Butler 1882. (MYRMECOZELA, Zeller).
T. E. S. 1881, 593 : type *aspersus*, Butler [Japan].

Helioz. PSELIASTIS, Meyrick 1897.
P. Linn Soc. N. S. W. XXII 406 : type *trizona*, M. [Tasmania].

Aluc. PSELNOPHORUS, Wallengren 1881.
Ent. Tidskr. XI 96 : type *brachydactylus*, Treits. [Europe].
|| Gypsochares, Meyr. 1890.
|| Crasimetis, Meyr. 1890.

Tin. PSEPHOCRITA, Meyrick 1919.
Exot. Micr. II 255 : type *melanodoxa*, M. (French Guiana).

Tin. PSEPHOLOGA, Meyrick 1921.
Exot. Micr. II 474-475 : type *centrogramma*, M. [Mesopotamia].

Crypt. PSEPHOMERES, Meyrick 1916.
Exot. Micr. I 505-506 : type *leptogramma*, M. [French Guiana].

Schreck. PSEUDAEGERIA, Walsingham 1889.
T. E. S. 1889, 18, t. 3 : type *squamicornis*, Felder [E. Australia].

Aeg. PSEUDALCATHOE, Le Cerf 1917.
Obth., Et. Lep. comp. XIV 320 : type *chatunayi*, Le Cerf [Panama].
Pseudalcathoe, Le Cerf, Obth. Et. Lep comp. XII 14 (1916) (*non-descr.*).

Tin. Pseudanaphora, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887. 170 : type *arcanella*, Clemens [Atlantic States].

Schreck. PSEUDASTASIA, Walsingham 1909.
Biol. Centr. Am., Het. IV 1, f. 1 : type *opulenta*, Wlsm. [Panama].

Oec. Pseudatemelia, Rebel 1910. (BORKHAUSENIA, Hb.).
Verh. z.-b. Ges. Wien LX 29 : type *aeneella*, Rebel (Europe).

Tortr. PSEUDATTERIA, Walsingham 1913.
Biol. Centr. Am., Het. IV 214 : type *potamites*, Wlsm. (C. & S. America).

Ypbn. Pseudocaprima, Walsingham 1900. (LACTURA, Wlk.).
Cat. Het. Mus. Oxon. II 563 : type *callopisma*, Wlsm. [New Guinea].

Oec. PSEUDOCENTRIS, Meyrick 1921.
Exot. Micr. II 395 : type *testudinea*, M. [Peru].

Gel. Pseudochelaria, Dietz 1900. (GELECHIA, Hb.).
Entl. News XI. 352-353, t. 1 ff. 3 [a. b.] : type *walsinghami*, Dietz.

Tin. Pseudoconchylis, Walsingham 1884. (ACROLOPHUS, Poey).
T. E. S. 1884, 133 : type *laticapitana*, Wlsm. [California].

Gel. PSEUDOCRATES, Meyrick 1918.
Exot. Micr. II 99 : type *antisphena*, M. [S. India].

Oec. PSEUDODOXIA, Durrant 1895.
E. M. M. XXXI 107 : type *limulus*, Rogenhofer [Ceylon].

Oec ? PSEUDOECÓPHORA, Staudinger 1899.
Ergebn. Hamb. Magalh. Sammelr. IV 112-113 : type *vitellinella*, Stdgr. [Tierra del Fuego].

Eucosm. PSEUDOGALLERIA, Ragonot 1885.
Ann. S. E. Fr. (6) IV, Bull., p. L : type *inimicella*, Zeller [Atlantic States].

Aeg. PSEUDOMELITTIA, Le. Cerf. 1917.
Obth., Et. Lep. comp. XIV 240 : type *berlandi*, Le Cerf [E. & C. Africa].

Blast. PSEUDOPIGRITIA, Dietz 1900.
Tr. Am. Ent. Soc. XXVII 102, 112, t. 7 f. 10 : type *dorsimaculella*, Dietz [Pennsylvania].

Oec. PSEUDOPROTASIS, Walsingham 1897.
T. E. S. 1897. 44-45 : type *canariella*, Wlsm. [W. Africa].

Aeg. Pseudosetia, Felder 1861. (PARANTHRENE, Hb.).
Sitz. Akad. Wiss. Wien XLIII 28 : type *insularis*, Felder [Borneo ; Amboyna].
Pseudosesia, Marschall, Nomencl. Zool., p. 309 (1873) (*error*).

Tin. PSEUDOSYMMOCA, Rebel 1903.
Verh. z.-b. Ges. Wien LIII 413 : type *angustipennis*, Rebel [Sahara].

Ypon. Pseudotalara, Druce 1885. (LACTURA, Wlk.).
Biol. Centr. Am., Het. I 126 : type *chrysippa*, Druce [Guatemala].

Eucosm. Pseudotomia, Stephens 1834. (ENARMONIA, Hb.).
Ill. Brit. Ent., Haust. IV. 97-98 : type *strobilella*, Linn. [Europe].
Pseudotomia, Steph., Cat. Brit. Ins. II 175 (1829) (*non-descr.*).

Glyph. Pseudotortrix, Turner 1900 (IMMA, Wlk.).
Tr. R. Soc. Austr. XXIV 15 : type *acosma*, Turner [E. & N. Australia].

Tin. Pseudoxylesthia, Walsingham 1907. (DYSTOPASTA, Busck).
Proc. U. S. Nat. Mus. XXXIII 226 : type [*yumaella*, Kearfott=] *angustella*, Wlsm. [N. America].

Tin. PSEUDURGIS, Meyrick 1908.
P. Z. S. 1908. 741 : type *tectonica*, M. [S. Africa].

Oec. Psilocorsis, Clemens 1860. (CRYPTOLECHIA, Zeller).
Proc. Acad. Nat. Sci. Philad. XII 212 : type *quercicella*, Clem. [N. America].

Tin. Psilothrix, Wocke 1871 (*praeocc.*) (PENESTOGLOSSA, Rghfr.).
Cat. Lep. Pal., p. 267 : type *dardoinella*, Mill. (Europe).

Oec. PSITTACASTIS, Meyrick 1909.
T. E. S. 1909. 20 : type *tricrica*, M. [S. America].
|| Necedes, Wlsm. 1912.

Gel. Psoricoptera, Stainton 1854. (HYPATIMA, Hb.).
Ins. Brit. Tin., pp. 100-101, t.4 f. 4 c ; type *gibbosella*, Zeller [Europe].

Oec. PSOROSTICHA, Lower 1901.
Tr. R. Soc. S. Austr. XXV. 91 : type [*zizyphi*, Stt.=] *acrolopha*, Lower [E. Australia : India, etc.].
|| Syllochitis, Meyr. 1910.

Tin. Psychoides, Bruand 1853. (TEICHOBIA, H. S.).
C. R. Doubs Soc. d'Emul. III, p. . . . . : type . . . .

Crypt. Psychra, Walsingham 1907. (THYROCOPA, Meyr.).
Faun. Hawaii I, 489-490 : type *phycidiformis*, Wlsm. [Hawaii].

Plut. PSYCHROMNESTRA, Meyrick 1924.
Exot. Micr. III 88 : type *isoniphas*, M. [Kashmir].

Eucosm. PTERNIDORA, Meyrick 1911.
P. Linn. Soc. N. S. W. XXXVI 285-286 : type *phloeotis*, M. [Queensland].

Tortr. PTERNOZYGA, Meyrick 1908.
B. J. XVIII 621 : type *haeretica*, M. [India].

Pterolonch. PTEROLONCHE, Zeller 1847.
Isis XL 896 : type *albescens*, Zeller [S. Europe].

Aluc. Pterophora, Hübner (*non. descr.*) (ALUCITA, Linn.).
Tentamen, p. 2 (1806) (*nom. nud.*) : type "*pentadactyla.*"

Aluc. Pterophorus, Geoffroy 1762. (ALUCITA, Linn.).
Hist. Nat. Ins. II 91-92 : type *pentadactyla*, Linn. [Europe].

Schreck. PTEROPYGME, Speiser 1902.
Berlin Ent. Zeits. XLVII 142 : type *pyrrha*, Pagenstecher [Bismarck Isds.].
|| Synaphia, Pag. 1900 (*praeocc.*).

Plut. PTEROXIA, Guenée (*non-descr.*) (YPSOLPHUS, Fb.).
Ann. S. E. Fr. (2) III 335 : type [*mucronella*, Scop.] *cultrella*, Hb. [Europe].

Cosm. Ptilochares, Meyrick 1886. [LIMNAECIA, Stainton].
P. Linn. Soc. N. S. W. XI 1046 : type *trissodesma*, M. [Victoria].

Elach. PTILODOXA, Meyrick 1921.
Zool. Meded. VI 185 : type *lorigera*, M. [Java].

Crypt. PTILOGENES, Meyrick 1917.
Exot. Micr. II 60 : type *acronitis*, Busck [Guiana].

Gel. PTILONOSTYCHIA, Walsingham 1911.
Biol. Centr. Am., Het. IV 109 : type *plicata*, Wlsm. [Panama].

Schreck. PTILOSTICHA, Meyrick 1910.
T. E. S. 1910 440-441 : type *cyanoplaca*, M. [Borneo].

Gel PTILOTHYRIS, Walsingham 1897.
T. E. S. 1897. 37 : type *purpurea*, Wlsm. [W. Africa].

Tin. PTISANORA, Meyrick 1913.
Ann. Transv. Mus. III 334 : type *trivialis*, M. [Transvaal].

Glyph. PTOCHAULA, Meyrick 1920.
Exot. Micr. II 325 : type *niphadopa*, M. [Khasis].

Gel. Ptocheuusa, Heinemann 1870. (ARISTOTELIA, Hb.).
Kleinschmett. Deuts. II, i, 288-289 : type *inopella*, Zeller [Europe].

Crypt. PTOCHORYCTIS, Meyrick 1894.
T. E. S. 1894. 19 : type *eremopa*, M. [Burma].
|| Amorboea, Meyr. 1908.

Oec. PTOCHOSARIS, Meyrick 1906.
Tr. R. Soc. S. Austr. XXX 37 : type *horrenda*, M. [S. E. Australia].

Gel. PTYCERATA, Ely 1910.
Proc. E. S. Wash. XII 69 : type *busckella*, Ely [U. S. America].

Tortr. Ptychamorbia, Walsingham 1892. (AMORBIA, Clemens).
P. Z. S. 1891. 497 : type *exustana*, Zeller [Colombia].

Tortr. Ptycholoma, Stephens 1834. (CACOECIA, Hb.).
Ill. Brit. Ent., Haust. IV 141-142 : type *lecheana*, Linn. [Europe ; Asia Minor].
Ptycholoma, Steph., Cat. Brit. Ins II 183 (1829) (*non-descr.*).

Crypt. PTYCHOTHRIX, Walsingham 1907.
Faun. Hawaii. I 489 : type *vagans*, Wlsm. [Hawaii].

Tin. PTYCHOXENA, Meyrick 1916.
Exot. Micr. I 615-616 : type *tephrantha*, M. [India ; Ceylon ; Australia ; S. Africa ; S. America].

Gel. Pycnobathra, Lower 1901. (MEGACRASPEDUS, Zeller).
Tr. R. Soc. S. Austr. XXV 80 : type *achroa*, Lower [N. S. Wales].

Lyon. Pycnobela, Turner 1923. (ASYMPLECTA, Myer.).
Tr. R. Soc. S. Austr. XLVII 182-183 : type *aplectodes*, Turner [Queensland].

Oec. Pycnocera, Turner 1896. (CRYPTOPEGES, Butler).
Tr. R. Soc. S. Austr. XX 21-22 : type *hypoxantha*, Turner [Queensland].

Gel. PYCNODYTIS, Meyrick 1918.
Ann Transv. Mus. VI 15 : type *crebaula*, M. [Zululand].

Gel. PYCNOPOGON, Chrétien 1922.
Obth., Et. Lep. Comp. XIX 356-357, figs. : type *scabrellus*, Chrét. [Marocco].

Gel. PYCNOSTOLA, Meyrick 1917.
E. M. M. LIII 113 [*Pyncostola* : error typogr.] : type *operosa*, M. [S. Africa].

Oec. PYCNOTARSA, Meyrick 1920.
Exot. Micr. II 374 : type *hydrochroa*, M. [Brazil].

Oec. Pycnozancla, Turner 1917. (EPICURICA, Meyr.).
Tr. R. Soc. S. Austr. XLI 109 : type *acribes*, Turner [Queensland].

Eucosm. Pygolopha, Lederer 1859. (EUCOSMA, Hb.).
Wien. Ent. Mon. III 279-280, t. 2 ff. 1, 2 : type [*lugubrana*, Tr.-] *trinacriana*, Led. [Europe].

Tin Pylaetis, Meyrick 1907. (SPATULARIA, Deventer).
B. J. XVII 752 [*Pyloetis* : error typogr.] : type [*mimosae*, Stainton=] *ophionota*, M. [India ; Java].

Ypon. PYRAMIDOBELA, Braun 1923.
Tr. Am. Ent. Soc. XLIX 118 : type *quinquecristata*, Braun [U. S. America].
|| Idioptila, Meyr. 1927.

Aeg. PYRANTHRENE, Hampson 1919.
Novit. Zool. XXVI 110 : type *flammans*, Hmp. [C. Africa].

Cosm. PYRETAULAX, Meyrick 1921.
Zool. Med. VI 170 : type *miltogramma*, M. [Java].

Oec. PYRGOPTILA, Meyrick 1888.
P. Linn. Soc. N. S. W. XIII 1600 : type *serpentina*, M. [W. Australia].

Tortr. PYRGOTIS, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 139-140 : type *insignana*, M. [Australia].

Cosm. PYRODERCES, Herrich-Schäffer 1853.
Schmett. Eur. V 47, t. 13 ff. 29-30 : type *argyrogrammos*, Zeller [Europe].
|| Syntomactis, Meyr. 1888.
|| Anatrachyntis, Meyr. 1915.

Eucosm. Pyrodes, Lederer 1859. (PAMMENE, Hb.).
Wien. Ent. Mon. III 373 : type *rhediella*, Clerck [Europe : Asia Minor].
Pyrodes, Guenée, Ann. S. E. Fr. (2) III 187 (1845) (*non-descr.*).

Aeg. Pyropteron, Newman 1832. (CONOPIA, Hb.).
Ent. Mag. I 75-76 : type *chrysidiformis*, Esper. [Europe].

Ypon. Pyrozela, Meyrick 1906. (ANTICRATES, Meyr.).
B. J. XVII 414 : type *xanthomima*, M. [Ceylon].

Aeg. Pyrrhotaenia, Grote 1875. (SYNANTHEDON, Hb.).
Canad. Ent. VII 174 : type *floridensis*, Grote [Florida].

R

Gel. RECURVARIA, Haworth 1828.
Lep. Brit., p. 547 : type *nanella*, Hb. [Europe].
|| Telea, Stephens 1834.
|| Evagora, Clemens 1860.
|| Eidothea, Chambers 1873.

|| Sinoe, Chambers 1873.
|| Coleotechnites, Chambers 1880.
|| Aphanaula, Meyr. 1895.
|| Hinnebergia, Spuler 1910.

Eucosm. RETINIA, Stainton 1859.
Manual II 247 : type *buoliana*, Schiff. [Europe].
Retinia, Guenée, Ann. S. E. Fr. (2) III 180 (1845) (*non-descr.*).

Gel. Reuttia, Hofmann 1897. (THIOTRICHA, Meyr.).
Iris X 228 : type *subocellea*, Stephens [Europe].

Tortr. Rhacodia, Hübner 1826. (PERONEA, Curtis).
Verz., p. 384 : type [*caudana*, Fb.—] *emargana*, Fb. [Europe].

Cosm. RHADINASTIS, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 311 : type *microlychna*, M. [E. Australia].

Gel. RHADINOPHYLLA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 166 : type *siderosema*, Turner [Queensland ; Fiji].

Crypt. RHAPSODICA, Meyrick 1927.
Exot. Micr. III 363-364 : type *antitona*, M. [Sumatra].

Incurv. RHATHAMICTIS, Meyrick 1924.
Tr. N. Z. Inst. LV 662 : type *perspersa*, M. [New Zealand].

Oec. RHINDOMA, Busck 1914.
Proc. U. S. Nat. Mus. XLVII 24-25 : type *rosapicella*, Busck [Panama].

Diplos. RHINOMACTRUM, Walsingham 1907.
Faun. Hawaii. I 531 : type *rutilellum*, Wlsm. [Hawaii].

Gel. Rhinosia, Treitschke 1833 (DICHOMERIS, Hb.)
Schmett. Eur. IX. ii, 9 : type *ustulella*, Fb. [Europe].

Tin. Rhitia, Walker 1864. (MONOPIS, Hb.).
Cat. XXIX 818 : type *congestella*, Wlk. [Sarawak].

Glyph. RHOBONDA, Walker 1863.
Cat. XXVIII 424-425 : type *gaurisana*, Wlk. [C. & S. America].

Gel. Rhobonda, Walker 1864 (*praeocc.*) (DICHOMERIS, Hb.).
Cat. XXIX 802 : type *punctatella*, Wlk. [Brazil].

Crypt. RHODANASSA, Meyrick 1915.
Exot. Micr. I 480 : type *callimnestra*, M [S. America].

Tin. RHODOBATES, Ragonot 1895.
Bull. S. E. Fr. 1895. 104 : type *laevigatella*, H. S. [Asia Minor].

Oec. RHOECOPTERA, Meyrick 1909.
Ann. S. Afr. Mus. V. 373 : type *gigas*, Wlsm. [S. Africa].

Tortr. RHOMBOCEROS, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 180 : type *nodicornis*, M [New Guinea].

Coprom. RHOPALOSETIA, Meyrick 1926.
Exot. Micr. III. 241 : type *phlyctaenopa*, M. [French Guiana].

Eucosm. Rhopobota, Lederer 1859. (ACROCLITA, Led.).
Wien. Ent. Mon. III 366-367 : type *naevana*, Hb. [Europe].

Tortr. Rhyacionia, Hübner 1826. (PERONEA, Curtis).
Verz., p. 379 : type *hastiana*, Linn. [Europe to Japan ; N. Africa ; N. America].

Eucosm. Rhyacionia, auct .[nec Hb.] : type *buoliana*. (EVETRIA, Hb.).

Gel. RHYNCHOPACHA, Staudinger 1871.
Berl. Ent. Zeits. XIV 303 : type *spiraeae*, Stdgr. [S. E. Russia].

Gel. RHYNCHOTONA, Meyrick 1923.
Exot. Micr. III 35 : type *phaeostrota*, M. [Peru].

Tortr. RHYTHMOLOGA, Meyrick 1926.
Exot. Micr. III 249 : type *numerata*, M. [Colombia].

Eucosm. Ricula, Heinrich 1926 (HEMIMENE, Hb.).
U. S. Nat. Mus. Bull. 132, p. 18, ff. 4, 25, 106 : type *maculana*, Fernald [Florida].

? RIDIASCHINA, Brèthes 1917.
An. Ci. Argent. LXXXII 140 : type *congregatella*, Brèthes.
[*Note.*—Unrecognized ; description not available].

Orn. Ripidophora, Hübner (*non-descr*).
Tentamen, p. 2 (1806) (*nom. nud.*) : type " *hexadactyla*."

Glyph. Ripismia, Wocke 1876. (CHOREUTIS, Hb.).
Hein., Kleinschmett. Deuts. II. ii, 399 : type *dolosana*, H. S. [S. Europe ; S. W. Asia].

Aeg. RODOLPHIA, Le Cerf 1911.
Bull. S. E. Fr. 1911, 92 : type *hombergi*, Le Cerf. [Madagascar].

Ypon. ROESLERSTAMMIA, Zeller 1839.
Isis XXXII 202-203 : type *erxlebella*, Fb. [Europe].
|| Chrysitella, Zeller 1839.
|| Röslerstammia, Stainton 1854.
|| Roslerstammia, Stainton 1859.
|| Roesslerstammia, Hein. 1870.

Eucosm. Roxana, Stephens 1831. (ARGYROPLOCE, Hb.).
Ill. Brit. Ent., Haust. IV 118 : type [*arcuella*, Cl.=] *arcuana*, Linn. [Europe to Japan].

? RUCUMA, Walker 1863.
Cat. XXVIII 441 : type *recurvana*, Wlk. [Brazil].
[Not recognized ; probably not a Micro.].

S

Micropt. SABATINCA, Walker 1863.
Cat. XXVIII 511 : type *incongruella*, Wlk. [New Zealand].
|| Palaeomicra, Meyr. 1886.
?|| Micropardalis, Meyr. 1912.

? SAFRA, Walker 1863.
Cat. XXVII 195 : type *metaphaeella*, Wlk. [Shanghai].
[Not recognized : perhaps not a Micro.- ? Pyralidae.].

Tin. Safra, Walker 1864 (*praeocc.*) (LINDERA, Blanchard).
Cat. XXIX 785 : type [*tessellatella*, Bl.=] *bogotatella*, Wlk. [S. America ; Australia ; India, etc.].

Glyph. SAGALASSA, Walker 1856
Cat. VIII 5 : type *robusta*, Wlk. [S. America].
|| Gora, Wlk. 1862.
|| Jonaca, Wlk. 1863
|| Miscera, Wlk. 1863.
|| Polyphlebia, Felder Ms. 1874.
|| Callatolmis, Butler 1877.
|| Melanoxena, Dognin 1910.

Gel. Sagaritis, Chambers 1872 (*praeocc*) (DICHOMERIS, Hb.).
Canad. Entom. IV 226 : type *punctipennella*, Clemens [N. America].

Tin. SAGEPHORA, Meyrick 1888.
Tr. N. Z. Inst. XX 95-96 : type *phortegella*, M. [New Zealand].

Tin. Sagora, Walker 1869. (CORYPTILUM, Zeller).
Charact. Undescr. Lep. Het., p. 101 : type *rutilella*, Wlk. [India ; Sumatra ; Formosa].

? SALAPOLA, Walker 1863.
Cat. XXVIII 525 : type *argentea*, Wlk. [Brazil].
[Not recognized ; probably not a Micro.]

[? SALOBRENA, Walker 1863.
Cat. XXVIII 446 : type *excisana*, Wlk. [Brazil].
[*Note.*—Not a Micro.]

[? SAMCOVA, Walker 1863.
Cat. XXVIII 435-436 : type *incensana*, Wlk. [Brazil].
[*Note.*- Not a Micro.]

Eupist. SANDALOECA, Meyrick 1920.
Ann. S. Afr. Mus. XVII 300 : type *lathraea*, M. [Cape Colony].

[? SANGUESA, Walker 1863.
Cat. XXVIII 440 : type *cosmiana*, Wlk. [Brazil].
[*Note.*—Not a Micro.].

Aeg. SANNINA, Walker 1856.
Cat. VIII 64-65 : type *uroceriformis*, Wlk. [U. S. America].
|| Saunina, Boisduval 1875 (*lapsus*).
|| Phemonoe, Hy.—Edw. 1882.
|| Sospita, Hy.—Edw. 1882.

Aeg. Sanninoidea, Beutenmuller 1899. (CONOPIA, Hb.).
Bull. Amer. Mus. N. Hist. XII 160 : type *exitiosa*, Say [N America].
Sanninoidea, Beut., Bull. Am. Mus. N. H. VIII 126 (1896) (*non-descr.*).

Oec. Santuzza, Heinrich 1920. (ANCHONOMA, Meyr.).
Proc. E. S. Wash. XXII 43-50, tt. 3-4 : type [*xeraula*, M.—] *kuwanii*, Heinrich [Japan ; Assam].

Tin. Sapheneutis, Meyrick 1907. (NARYCIA, Stephens).
B. J. XVIII 155 : type *camerata*, M. [Ceylon ; S. India].

Phal. SAPHENISTA, Walsingham 1914.
Biol. Centr. Am., Het. IV 296 : type *lacteipalpis*, Wlsm. [W. Indies].

Tin. Sapinella, Kirby 1892. (ACROLOPHUS, Poey).
Cat. Lep. Het. I, 424 : type *mora*, Grote [Atlantic States].

Glyph. Saptha, Walker 1864. (TORTYRA, Wlk.).
Cat. XXX 1015 : type *divitiosa*, Wlk. [Ceram].

Ypon. Sarbena, Walker 1864 (*praeocc.*). (LACTURA, Wlk.).
Cat. XXXI 256 : type *conflagrans*, Wlk. [New Guinea].

Plut. SARIDOSCELIS, Meyrick 1894.
T. E. S. 1894, 28 : type *sphenias*, M. [Ceylon ; India ; Burma].

Gel. SARISOPHORA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 403-404 : type *leptoglypta*, M. [E. Australia].
|| Styloceros, Meyr. 1904.

Tin. SAROCRANIA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 193 : type *ischnophylla* Turner [Queensland].

Oec. SAROPLA, Meyrick 1884.
P. Linn. Soc. N. S. W. VIII 743 : type *caelatella*, M. [E. Australia]
Saropla, Meyr., P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid : no associated species].

Gel. SAROTORNA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 322-323 : type *eridora*, M. [N. S. Wales].

Gel. SATHROGENES, Meyrick 1923.
Exot. Micr. III 2 : type *malachias*, M. [Khasis].

Oec. SATRAPIA, Meyrick 1886.
P. Linn. Soc. N. S. W. X 823 : type *thesaurina*, M. [S. E. Australia].
Satrapia, Meyr., P. Linn. Soc. N. S. W. VII 425 (1883) [Invalid ; no associated species].

Gel. SATRAPODOXA, Meyrick 1926.
Wyts. Gen. Ins., Fasc. 184, pp. 132-133 ; type *regia*, M. [S. America].

Eucosm. SATRONIA, Heinrich 1926.
U. S. Nat. Mus. Bull. 132, p. 17, f. 23 : type *tantilla*, Heinrich [Florida].

Aeg. Saunina, Boisduval 1875 (*lapsus*) (SANNINA, Wlk.).
Hist. Nat. Lep. Het. I 465 : type *uroceriformis*, Wlk. [N. America].

[Noctuidae. SAVOCA, Walker 1864.
Cat XXX 996 : type *sarawakana*, Wlk. [Sarawak].]

Oec. SCAEOSOPHA, Meyrick 1914.
Exot. Micr. I 254 : type *percnaula*, M. [Assam].

Adel. Scaeotes, Durrant 1915. (NEMATOPOGON, Zeller).
Lep. Woll. Exp., p. 162 : type *swammerdammella*, Linn. [Europe].

Oec. SCALIDEUTIS, Meyrick 1906.
B. J. XVII 409 : type *escharia*, M. [Ceylon].
|| Liozancla, Turner 1919.

Tin. Scalidomia, Walsingham 1891. (HAPSIFERA, Zeller).
T. E. S. 1891, 83-84 : type *horridella*, Wlk. [S. Africa.].

Tin. SCALMATICA, Meyrick 1911.
Tr Linn. Soc. (2) XIV 306 : type *rimosa*, M. [Seychelles].

Glyph. Scaptesylix, Hampson 1895. (IMMA, Wlk.)
T. E. S. 1895. 283 : type [*dichroalis*, Snellen=] *hemichryseis*, Hmp. [Sumatra ; Burma].

Tin. SCARDIA, Treitschke 1830.
Schmett. Eur. VIII 289-290 : type [*boletella*, Fb.=] *boleti.*, Ochs. [Europe].
|| Phycis, Fabricius 1798 (*praeocc.*)
|| Phycia, Oken 1815 [variant spelling of *Phycis*].
|| Agarica, Sodoffsky 1837.
|| Gyra, Gistel 1848.
|| Morophaga, H. S. 1854.
|| Fernaldia, Grote 1881.
|| Atabyria, Snellen 1884.
?|| Sematocera, Durrant 1892.
|| Osphretica, Meyr. 1910.

Schreck. SCELORTHUS, Busck 1901.
Jl. N. Y. Ent. Soc. VIII 239-240, t. 9. f. 4 : type *pisoniella*, Busck [Florida].

Gel. SCEPTEA, Walsingham 1911.
Biol. Centr. Am., Het. IV 108-109, f. 23 : type *decedens*, Wlsm. [Mexico].

Tin. SCHEDIASTIS, Meyrick 1921.
Exot. Micr. II 475 : type *epiphracta*, M. [Palestine].
|| Tonicurgis, Meyr. 1922.

Gel. SCHEMATASPIS, Meyrick 1918.
Exot. Micr. II 141 : type *gradata*, M. [Assam].

Gel. SCHEMATISTIS, Meyrick 1912.
Ann. Transv. Mus. III 67-68 : type *analoxa*, M. [Transvaal].

Cosm. SCHENDYLOTIS, Meyrick 1910.
Rec. Ind. Mus. V 225-226 : type *chrysota*, M. [Sikkim].

Oec. SCHIFFERMUELLERIA, Hübner 1826.
Verz., p. 421 : type *schaefferella*, Linn. [Europe].
|| Chrysia, Milliére 1854.
|| Callima, Clemens 1860.
|| Epicallima, Dyar 1902.
|| Disqueia, Spuler 1910.

Oec. Schistodepressaria, Spuler 1910. (DEPRESSARIA, Hw.).
Schmett. Eur. II 337-338 : type *depressella*, Hb. [Europe].

Gel. SCHISTOPHILA, Chrétien 1899.
Bull. S. E. Fr. 1899. 112 : type *laurocistella*, Chrét. [S. W. Europe].

Tortr. SCHOENOTENES, Meyrick 1908.
B. J. XVIII 619-620 : type *synchorda*, M. [India].
|| Epitrichosma, Lower 1909.

Schreck. SCHRECKENSTEINIA, Hübner 1826.
Verz., p. 419 : type *festaliella*, Hb. [Europe].
|| Chrysocorys, Curtis 1833.

Gel. Schützeia, Spuler 1910. (STOMOPTERYX, Hein.).
Schmett. Eur. II 373, f. 128 : type *anthyllidella*, Hb. [Europe].

Tortr. Sciaphila, Treitschke 1830. (CNEPHASIA, Curtis).
Schmett. Eur. VIII 168 : type *wahlbomiana*, Linn. [Europe].
Sciaphila, Treits., Schmett. Eur. VII 233 (1829) (*non-descr.*).

Aeg. Sciapteron, Staudinger 1854. (PARANTHRENE, Hb.).
Diss. de Sesiis Berol., pp. 39, 43: type *tabaniformis*, Rott. [Europe].
Sciopterum, Bartel, Seitz Lep. Pal. II 376 (1912) (*emend*).

Crypt. SCIEROPEPLA, Meyrick 1886.
Tr. N. Z. Inst. XVIII 165 : type *typhicola*, M. [New Zealand; E. Australia].

Gel. SCINDALMOTA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 121 : type *limata*, Turner [Queensland].

Tortr. Sciniphor, Frölich (*non-descr.*), [EXAPATE, Hb.).
Enum. Tortr. Wurtemb., p. 12 (1828) ; type [*congelatella*, Clerck=) *gelatana*, Hb. [Europe].

Ypon. Scintilla, Guenée 1879 (*praeocc.*) (ATTEVA, Wlk.).
Ann. S. E. Fr. (5) IX 287 : type *pustulella*, Fb. [S. America].

Tin. SCIOMYSTIS, Meyrick 1919.
Exot. Micr. II 243 : type *amynias*, M. [S. India].

Tin. SCIOPETRIS, Meyrick 1891.
E. M. M. XXVII 58 : type *technica*, M. [Algeria].

Aeg. Sciopterum, Bartel 1912. (*vide* Sciapteron, Stdgr.)

Elach. SCIRTOPODA, Wocke 1876.
Hein., Kleinschmett. Deuts. II, ii, 465 : type *herrichiella*, H. S. [C. Europe].
|| Dyselachista, Spuler 1910.
[*Note.*—Nec *Scirtopoda*, Brandt (Mammalia), but I am unaware whether this name is valid. At present, *Scirtopoda*, Wocke, is in current use.]

Gel. SCLEROCECIS, Chrétien 1908.
Bull. S. E. Fr. 1908. 142 : type *pulverosella*, Chrét. [Algeria].
|| Hypocecis, Wlsm. 1904. (*nom. nud.*).

Gel. SCLEROGRAPTIS, Meyrick 1923.
Exot. Micr. III 31 : type *oxytypa*, M. [Brit. Guiana].

Tin. SCLEROPHRICTA, Meyrick 1918.
Ann. Transv. Mus. VI 46 : type *tyreuta*, M. [Transvaal].

Tin. SCLEROPLASTA, Meyrick 1919.
Exot. Micr. II 239 : type *liberiella*, Zeller [Liberia].

Stigm. SCOLIAULA, Meyrick 1895.
Handb., pp. 727-728, fig. : type *quadrimaculella*, Boh. [Europe].
|| Bohemannia, Stainton 1859 (*praeocc.*)

Oec. SCOLIOGRAPHA, Meyrick 1916.
Exot. Micr. I 554 : type *argospila*, M. [French Guiana].

Aeg. Scoliomima, Butler 1885. (TRILOCHANA, Moore).
T. E. S. 1885. 370 : type *insignis*, Butler [Borneo].

Tortr. SCOLIOPLECTA, Meyrick 1881.
P. Linn. Soc. N. S. W. VI 646 : type *comptana*, Wlk. [E. Australia].

Tin. SCORIODYTA, Meyrick 1888.
Tr. N. Z. Inst. XX 101-102 : type *conisalia*, M. [New Zealand].

Oec. SCORPIOPSIS, Turner 1894.
Tr. R. Soc. S. Austr. XVIII 132 : type *pyrobola*, M. [E. Australia].
|| Cerycostola, Meyr. 1902.
|| Gonionota, Meyr. 1886 (nec 1883) (*nom. nud.*).

Tortr. Scyphoceros, Turner 1925. [? DICELLITIS, Meyr.).
Tr. R. Soc. S. Austr. XLIX 53 : type *tholera*, Turner [N. Queensland].

Tin. SCYROTIS, Meyrick 1909.
Ann. S. Afr. Mus. V. 377 : type *athleta*, M. [Cape Colony].

Gel. SCYTHOSTOLA, Meyrick 1925.
Treubia VI 429 : type *heptagramma*, M. [Java].

Scythr. SCYTHRIS, Hübner 1826.
Verz., p. 414 : type *chenopodiella*, Hb. [Europe].
|| Galanthia, Hb. 1826.
|| Butalis, Treits. 1833 (*praeocc.*).
|| Copida, Sodoffsky 1837.
|| Enolmis, Duponchel. 1846.
|| Bryophaga, Ragonot 1874.
|| Arotrura, Wlsm. 1888.
|| Colinita, Busck 1907.
|| Apostibes, Wlsm. 1907.
?|| Erigethes, Wlsm. 1907.

Ypon. SCYTHROPIA, Hübner 1826.
Verz., pp. 413-414 : type *crataegella*, Linn. [Europe].

Eucosm. Selania, Stephens 1834. (ENARMONIA, Hb.).
Ill. Brit. Ent., Haust. IV 121 : type *leplastriana*, Curtis [Europe; Asia Minor].

Eucosm. Selenodes, Guenée (*non-descr.*) (ARGYROPLOCE, Hb.).
Ann. S. E. Fr. (2) III 160 (1845) : type *dalecarliana*, Gn. [Europe].

Oec. SELIDORIS, Meyrick 1926.
Ann. S. Afr. Mus. XXIII 336 : type *deligata*, M. [S. Africa].

Eucosm. Semasia, Herrich-Schäffer 1851. (EUCOSMA, Hb.).
Schmett. Eur. IV. 244 : type *messingiana*, F. R. (Europe).

Eucosm. Semasia, Stainton 1859 (*praeocc.*) (ENARMONIA, Hb.).
Manual II 240 : type *woeberiana*, Linn. (Europe).
Semasia, Steph., Cat. Brit. Ins. II 179 (1829) (*non-descr.*)
Semasia, Guenée, Ann. S. E. Fr. (2) III 179 (1845) (*non-descr.*).
Semasia, Steph., List Brit. Anim., B. M. X 48 (1852) (*non-descr.*).

Tin. Sematocera, Durrant 1892. (? SCARDIA, Tr.).
Distant's Nat. in Transvaal, p. 242, t. 4 f 4 ; type *fuliginipuncta*, Drt. [Transvaal].

Tin. Semele, Chambers 1875. (HOMOSETIA, Clemens).
Cinc. Qly. Jl. Sci. II 243 : type *cristatella*, Chambers [Kentucky].

Oec. Semiocosma, Meyrick 1884. [IZATHA, Wlk.).
Tr. N. Z. Inst. XVI 22 : type *peroneanella*, Wlk. [New Zealand].
Semiocosma, Meyr., P. Linn. Soc. N. S. W. VII 424 (1883) [Invalid ; no associated species].

Gel. SEMIOMERIS, Meyrick 1923.
Exot. Micr. II 626 : type *pyretodes*, M. [S. America].

Oec. SEMIOSCOPIS, Hübner 1826.
Verz., p. 402 : type *steinkellneriana*, Schiff. [Europe].
|| Epigraphia, auct. (nec Duponchel).

Tin. Semiota, Dietz 1905. (SETOMORPHA, Zeller).
Tr. Am. Ent. Soc. XXXI 18, t. 6 f. 4 : type (*rutella*, Zeller=) *inamoenella*, Zeller.

Metachand. SEMNOCOSMA, Meyrick 1924.
T. E. S. 1923. 548-549 : type *necromantis*, M. [Rodriguez.]

Diplos. Semnoprepia, Walsingham 1907. (EUPERISSUS, Butler).
Faun. Hawaii. I 644 : type *fulvogrisea*, Wlsm. [Hawaii].

Gel. SEMNOSTOMA, Meyrick 1918.
Exot. Micr. II 127 : type *leucochalca*, M. [Assam].

Gel. SEMOCHARISTA, Meyrick 1922.
Ark. Zool. XIV, No. 15, p. 4 : type *idiospila*, M. [N. W. Australia].

Gel. Semodictis, Meyrick 1910. (HYPATIMA, Hb.).
Ann. Transv. Mus. II 16 : type *tetraptila*, M. [S. Africa.]

Tin. SENTICA, Walker 1863.
Cat. XXVIII 507 : type *oppositella*, Wlk. [Australia].

Eucosm. SEREDA, Heinrich 1923.
Proc. E. S. Wash. XXV 121 : type *lautana*, Clemens [N. America].

Eucosm. Sericoris, Treitschke 1830. (ARGYROPLOCE, Hb.).
Schmett. Eur. VIII 142 : type [*rivulana*, Scop.=] *conchana*, Hb. [Europe].
Syricoris, Treits., Schmett. Eur. VII 230 (1829) (*non-descr.*).

Plut. SERICOSTOLA, Meyrick 1927.
Exot. Micr. III 358 : type *rhodanopa*, M. [Colombia].

Tin. Ses, Hübner (*non-descr.*). (TINEA, Linn.).
Tentamen, p. 2 (1806) ; type "*pellionella*".

Aeg. Sesia, auct. (nec Fabricius 1775). (AEGERIA, Fb. ; CONOPIA, Hb., etc.).

Glyph. Sesiomorpha, Snellen 1885. (BURLACENA, Wlk).
Jahrb. Nass. Ver. Naturk. XXXVIII, 111 : type [*vacua*, Wlk.=] *abnormalis*, Snellen [Celebes].

? SETELLA, Schrank 1802.
Fauna Boica II, ii. 168 : type *marmorella*, Schrank [Europe].

[*Note.*—The type-species has apparently not been identified ; according to Durrant's M. S. List, it is a *Lampronia* and Setella—*Lampronia*, Steph. 1835.]

Aeg. Setia, Meigen 1830. (AEGERIA, Fb.).
Europ. Schmett. II 103 : type *apiformis*, Linn. [Europe, N. America].

[*Note.*—An emendation of *Sesia.*]

Glyph. SETIOSTOMA, Zeller 1875.
Verh. z-b. Ges. Wien XXV 324, t. 9 f. 42[a] : type *xanthobasis*, Zeller [N. America].

[*Note.*—Fide Busck (*Proc. E. S. Wash.* XXVII 48-49, t. 4 : 1925) belongs to Cryptophasidae (Stenomidae)].

Tin. SETOMORPHA, Zeller 1852.
Micr. Caffr., pp. 93-94 : type [*insectella*, Fb.=] *rutella*, Zeller [through-out Tropics and Subtropics].
||Semiota, Dietz 1905.
||Epilegis, Dietz 1905.
||Apotomia, Dietz 1905.
||Trisyntopa, Lower 1918.

Incurv. SETONELLA, McDunnough 1927.
Canad. Ent. LIX, 276 : type *buscki*, McDunnough [Brit. Columbia].

Glyph. Sezeris, Walker 1863. (CEBYSA, Wlk.).
Cat. XXVIII 509: type [*leucotelus*, Wlk.=] *conflictella*, Wlk. [E. Australia].

Gel. SICERA, Chrétien 1908.
Bull. S. E. Fr. 1908, 144: type *albidella*, Chrét. [Algeria].

Eucosm. Siderea, Stainton 1858. (ANCYLIS, Hb.).
Manual II 196: type *achatana*, Fb. [Europe].
Sideria, Guenée, Ann. S. E. Fr. (2) III 156 (1845) (*non-descr.*).

Oec. SIDEROGRAPTIS, Meyrick 1920.
Exot. Micr. II 311: type *leptophragma*, M. [Brazil].

Oec. Siganorosis, Wallengren 1881 (DEPRESSARIA, Hw.).
Ent. Tidskr. II 94: type *heracliana*, de Geer [Europe].

Glyph. Simaethis, Leach 1815. (ANTHOPHILA, Hw.).
Edinb. Encycl. IX 135: type [*fabriciana*, Linn.=] *dentana*, Leach [Europe].

Aeg. SIMILIPEPSIS, Le Cerf 1912.
Bull. Paris Mus. XVII 304, f. 3: type *violacea*, Le Cerf [W. Africa].
||Vespaegeria, Strand 1913.

Gel. SIMONEURA, Walsingham 1911.
Biol. Centr. Am., Het. IV 72, f. 16: type *ophitis*, Wlsm. [Mexico].

Aeg. SINCARA, Walker 1856.
Cat. VIII 61-62: type *eumeniformis*, Wlk. [Brazil].

Incurv. SINDONOPHORA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 16: type *leucozona*, M. [Cape Colony].

Gel. Sinoe, Chambers 1873. (RECURVARIA, Hw.).
Canad. Ent. V 229-231: type *robiniella*, Fitch [N. America].

Gel. Siovata, Walker 1866. (LECITHOCERA, H. S.).
Cat. XXXV 1837-1838: type *pulcherrimella*, Wlk. [Java].

Tin. Sippharara, Walker 1866. (CORYPTILUM, Zeller).
Cat. XXXV 1821: type [*klugii*, Zeller=] *euchromiella*, Wlk. [Sumatra to New Guinea].

Gel. Sirogenes, Meyrick 1923. (ILINGIOTIS, Meyr.).
Exot. Micr. III 3: type *thermophaea*, M. [Brazil; Peru].

Eucosm. Sisona, Snellen 1901. (ARGYROPLOCE, Hb.).
Tijds. Ent. XLVI 71: type *albitibiana*, Snellen [Java; India; Ceylon].

Gel. SISYRODONTA, Meyrick 1922.
Ark. Zool. XIV, No. 15, pp. 5-6: type *ochrosidera*, M. [N. W. Australia].

Coprom. **SISYROXENA, Meyrick 1916.**
Exot. Micr. II 7 : type *syncentra*, M. [Madagascar].

Gel. **SITOTROGA, Heinemann 1870.**
Kleinschmett. Deuts. II i. 287 : type *cerealella*, Olivier [Cosmopolitan].

Gel. **SMENODOCA, Meyrick 1904.**
P. Linn. Soc. N. S. W. XXIX 302 : type *erebenna*, M. [Australia].

Tortr. Smicrotes, Clemens 1860. (TORTRIX, Linn.).
Proc. Acad. Nat. Sci. Philad. XII 355 : type *peritrana*, Clemens [N. America].

Schreck. **SNELLENIA, Walsingham 1889.**
T. E. S. 1889, 13-15 : type *coccinea*, Wlsm. [India].

Schreck. **SOBAREUTIS, Meyrick 1910.**
T. E. S. 1910, 469-470 : type *conchophanes*, M. [Borneo].

Aluc. **SOCHCHORA, Walker 1864.**
Cat. XXX 952 : type *donatella*, Wlk. [S. America].

Tortr. Sociphora, Busck 1920. (EULIA, Hb.).
Insec. Inscit. Menstr. VIII 85 : type [*muscosana*, Zeller =] *magicana*, Zeller [Mexico to Argentina].

Tin. **SOLENOBIA, Duponchel 1846.**
Cat. Meth. Lep Eur., p. 358 : type *clathrella*, F. R. [Europe].
Solenobia, Dup., Lep. France, Suppl. IV, 197 (1842) (*non-descr.*).

[*Note.*—Strictly speaking, *Solenobia* is a synonym of *Taleporia*, Hb. 1826, whose type it contained on its inception.]

Aeg. Sometia, Meigen (*nom. nud.*). (CONOPIA, Hb.).
Europ. Schmett. II 115 (1830) : type *stomoxyformis*, Hb. [Europe].

[*Note.*—Evidently a mere misprint for *Setia.*]

Eucosm. **SONIA, Heinrich 1923.**
U. S. Nat. Mus. Bull. 123, p. 160, ff 22, 291 : type *constrictana*, Zeller [U. S. America].

Aeg. **SOPHONA, Walker 1856.**
Cat. VIII 60 : type *halictipennis*, Wlk. [Brazil].

Gel. **SOPHRONIA, Hübner 1826.**
Verz., p. 407 : type *illustrella*, Hb. [S. Europe ; S. W. Asia].

Cosm. Sorhagenia, Spuler 1910 (CHRYSOCLISTA, Stainton).
Schmett. Eur. II 384, f. 141 : type *rhamniella*, Zeller [Europe].

Eucosm. Sorolopha, Lower 1901. (ARGYROPLOCE, Hb.).
Tr. R. Soc. S. Austr. XXV 73 : type *cyclotoma*, Lower [Queensland].

Aeg. Soronia, Moore 1877 (*praeocc.*). (TINTHIA, Wlk.).
A. M. N. H. (4) XX 83 : type *cuprealis*, Moore [Shanghai].

Gel. SOROTACTA, Meyrick 1914.
T. E. S. 1914, 253-254 : type *viridans*, M. (Brit. Guiana].

Carp. SOSINEURA, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 157 : type *mimica*, Lower [Australia].

Aeg. Sospita, Henry-Edwards 1882. (SANNINA, Wlk.).
Papilio II 57 : type [*uroceriformis*, Wlk.=] *quinquecaudata*, Ridings. [U. S. America].

Plut. Spania, Guenée (*non-descr.*) [EIDOPHASIA, Stephens].
Ann. S. E. Fr. (2) III 340 (1845) : type *messingiella*, F.R. [Europe].

Oec. SPANIACMA, Meyrick 1913.
Exot. Micr. I 129 : type *bacchias*, M. [N. Australia].

Ypon. SPANIOPHYLLA, Turner 1917.
Proc. R. Soc. Queensl. XXIX 89: type *epiclithra*, Turner [Australia].

Lith. SPANIOPTILA, Walsingham 1897.
P. Z. S. 1897, 148 : type *spinosa*, Wlsm. [W. Indies].

Tortr. SPARGANOTHIS, Hübner 1826.
Verz. pp. 386-387 : type *pilleriana*, Schiff. [Europe].
|| Oenectra, Guenée 1845.
|| Oenophthira, Duponchel 1845.
|| Begunna, Wlk. 1863.
|| Leptoris, Clemens 1865.
|| Cenopis, Zeller 1875.

Tortr. SPATALISTIS, Meyrick 1907.
B. J. XVII 978 : type *rhopica*, M. [India.]
|| Chrosis (nec Stt.), Kennel 1907, Pierce 1922.

Tin. SPATULARIA, Deventer 1904.
Tijds. Ent. XLVII 1-4, t. 1 ff. 1[a-b] : type [*mimosae*, Stt.=] *fuligineella*, Deventer [India ; Java].
|| Pylaetis, Meyr. 1907.

Oec. SPHAERELICTIS, Meyrick 1924.
Exot. Micr. III 102-103 : type *dorothea*, M. [S. India].

Tortr. Sperchia, Walker 1869. (EPAGOGE, Hb.).
Char. Undescr. Het., p. 83 : type *intractana*, Wlk. [Australia].

Eucosm. Sphaeroeca, Meyrick 1895. (EUCOSMA, Hb.).
Handb., p. 490 : type *obscurana*, Stephens [Europe].

Gel. SPHAGIOCRATES, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 183 : type *lusoria*, M. [Java; Sumatra].

Gel. SPHALERACTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 328 : type *platyleuca*, Lower [Australia].

Tortr. Sphaleroptera, Stainton 1859. (CNEPHASIA, Curtis).
Manual II 256 : type [*longana*, Hw.=] *ictericana*, Hw. [Europe ; Asia Minor].
Sphaleroptera, Guenée, Ann. S. E. Fr. (2) III 167 (1845) (*non-descr.*).

Crypt. SPHALEROSTOLA, Meyrick 1927.
Exot. Micr. III 365 : type *caustogramma*, M. [New Ireland].

Aeg. Sphecia, Hübner 1820. (AEGERIA, Fb.).
Verz., p. 127 : type *crabroniformis*, Lewin [Europe].

Aeg. Sphecodoptera, Hampson 1893. (AEGERIA, Fb.).
Fauna India, Moths I 189 : type *repanda*, Wlk. [India].

Ypon. SPHECODORA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. p. 87 : type *porphyrias*, M. (Br. E. Africa).

Aeg. SPHECOSESIA, Hampson 1910.
B. J. XX 93 : type *pedunculata*, Hmp. [Sikkim].

Aluc. SPHENARCHES, Meyrick 1886.
T. E. S. 1886, 8 : type [*caffer*, Zeller=] *synophrys*, M. [W. Africa to S. Asia and Australia].

Gel. SPHENOCRATES, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 234 : type *aulodocha*, M. [New Guinea].

Ypon. SPHENOGRAPTIS, Meyrick 1913.
Exot. Micr. I 145 : type *celetica*, M. [Queensland].

Gel. SPHENOGRYPA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. p. 71 : type *syncosma*, M. [Br. E. Africa].

Tortr. SPHETERISTA, Meyrick 1912.
Exot. Micr. I 2 : type *variabilis*, Wlsm. [Hawaii].

Oec. SPHYRELATA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 360-361 : type [*amatella*, Wlk.=] *indecorella*, M. [E. Australia].
Sphyrelata, Meyr, P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species].

Ypon. SPILADARCHA, Meyrick 1913.
Exot. Micr. I 139 : type *derelicta*, M. [Brit. Guiana].

Eucosm. SPILONOTA, Stephens 1834.
Ill. Brit. Ent., Haust. IV 90: type *ocellana*, Fb. [Europe; N America].
Spilonota, Steph., Cat. Brit. Ins. II 173 (1829) (*non-descr.*).
|| Tmetocera, Lederer 1859.
|| Monilia, Wlk. 1866.
|| Stepsiceros, Meyr. 1881 (*praeocc.*).
|| Strepsicrates, Meyr. 1888.
|| Phthinolophus, Dyar 1903.

Cosm. SPIROTERMA, Meyrick 1915.
Exot. Micr. I 324: type *caranaea*, M. [Ceylon].

Tin. SPORADARTHRA, Meyrick 1911.
Tr. Linn. Soc. (2) XIV, 303: type *sicaria*, M. [Seychelles].

Eucosm. SPOROCELIS, Meyrick 1907.
B. J. XVII 732: type *marmaropa*, M. [Ceylon].

Cosm. Spuleria, Hofmann 1897. (CHRYSOCLISTA, Stainton).
Iris X 230: type *aurifrontella*, Hb. [C. and S. Europe].

Plut. SPYRIDARCHA, Meyrick 1913.
Exot. Micr. I 146-147: type *titanota*, M. [India].

Gel. STACHYOSTOMA, Meyrick 1923.
Exot. Micr. III 28: type *psilodoxa*, M. [Ecuador].

Plut. STACHYOTIS, Meyrick 1905.
B. J. XVI 612: type *epichrysa*, M. [Ceylon].

Cosm. STAGMATOPHORA, Herrich-Schäffer 1853.
Schmett. Eur. V 49, t. 13 ff. 27, 28: type *heydeniella*, F. R. [Europe].

Gel. STAGMATURGIS, Meyrick 1923.
Exot. Micr. III 25: type *catharosema*, M. [Brazil].

Schreck. Staintonia, Staudinger 1859. (ERETMOCERA, Zeller).
Stett. Ent. Ztg. XX 250: type *medinella*, Stdgr. [S. Europe to India].

Aluc. Stangeia, Tutt (*non-descr.*). (TRICHOPTILUS, Wlsm.).
Ent. Rec. XX 53 (1908): type *siceliota*, Zeller [S. Europe].

Eucosm. STATHEROTIS, Meyrick 1909.
B. J. XIX 591: type *decorata*, M. [Ceylon].

Schreck. STATHMOPODA, Herrich-Schäffer 1853.
Schmett. Eur. V 54, t. 9 f. 22: type *pedella*, Linn. [Europe].
|| Boocara, Butler 1880.
|| Placostola, Meyr. 1887.

Tin. Stathmopolitis, Walsingham 1908. (DYSMASIA, H. S.).
P. Z. S. 1907, 1019-1020: type *tragocoprella*, Wlsm. [Tenerife].

Aluc. STEGANODACTYLA, Walsingham 1891.
E. M. M. XXVII 241 . type *concursa*, Wlsm. [Ceylon ; S. India].

Eucosm. Steganoptycha, Stephens 1834. (EUCOSMA, Hb.).
Ill. Brit. Ent., Haust. IV 105 : type [*nisella*, Cl.=] *boeberana*, Fb. [Europe to Siberia ; N. America].

Ypon. STEGANOSTICHA, Meyrick 1921.
Ann. Transv. Mus. VIII 118 : type *remigera*, M. [Natal].

Gel. STEGASTA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 313 : type *variana*. M. [Australia ; India ; Africa].

Lyon. Stegommata, Meyrick 1880. (LYONETIA, Hb.).
P. Linn. Soc. N. S. W. V 171-172 : type *leptomitella*, M. [E. Australia].

Gel. STELECHORIS, Meyrick, 1926.
Wyts. Gen. Ins., fasc. 184, p. 243 : type *exaema*, M. [Ceylon ; India].

Tin. STEMAGORIS, Meyrick 1912.
Ann. Transv. Mus. III 79 : type *asylaea*, M. [Transvaal].

Phal. Stenodes, Guenée (*non-descr.*). (PHALONIA, Hb.).
Ann. S. E. Fr. (2) III 300 (1845) : type *elongana*, F. R. (Europe).

Gel. STENOLECHIA, Meyrick 1894.
E. M. M. XXX 230 : type *gemmella*, Linn. [Europe].

Crypt. STENOMA, Zeller 1839.
Isis XXXII 195 : type *litura*, Zeller [N. America].
|| Auxocrossa, Zeller 1854.
|| Mesoptycha, Zeller 1854.
|| Brachiloma, Clemens 1863 (Brachyloma, Chambers).
|| Harpalyce, Chambers 1874 (*praeocc.*).
|| Ide, Chambers 1880.
|| Diastoma, Möschler 1882.
|| Anadasmus, Wlsm. 1897.
|| Gonioterma, Wlsm. 1897.
|| Menestomorpha, Wlsm. 1907.
|| Orphnolechia, Meyr. 1909.
|| Prasolithites, Meyr. 1911.
|| Mothonica, Wlsm. 1912.
|| Catarata, Wlsm. 1912.
|| Aedemoses, Wlsm. 1912.
|| Athleta, Wlsm. 1912.
|| Zetesima, Wlsm. 1912.
|| Epidiopteryx, Rebel. 1916.

Gel. Stenopherna, Lower 1901. (APATETRIS, Stdgr.)
Tr. R. Soc. S. Austr. XXV 78: type *chionocephala*, Lower [N. S. Wales.].

Oec. Stenoptera, Duponchel 1838. (DASYCERA, Stephens).
Ann. S. E. Fr. VII 146: type [*sulphurella*, Fb.=] *orbonella*, Dup. [Europe].

Aluc. STENOPTILIA, Hübner 1826.
Verz., p. 430: type *pterodactyla*, Linn. [Europe].
|| Mimaeseoptilus, Wlgn. 1859 [? 1862].
|| Doxosteres, Meyr. 1886.
|| Adkinia, Tutt 1906.

Tin. Stenoptinea, Dietz 1905. (HOMOSETIA, Clemens).
Tr. Am. E. S., XXXI 86: type *ornatella*, Dietz [Distr. Columbia]

Aeg. Stenosphe ia, Le Cerf 1917. (CONOPIA, Hb.).
Obth., Et. Lep. Comp. XIV 285: type *columbica*, Le Cerf [Bogota].

Elach. STEPHENSIA, Stainton 1858.
T. E. S. (2) IV 269-270: type *brunnichiella*, Linn. [Europe].

Gel. STEREMNIODES, Meyrick 1923.
Exot. Micr. III 37: type *sciactis*, M. [Brazil; Guiana].

Oec. STEREODYTIS, Meyrick 1914.
Exot. Micr. I 238: type *crithina*, M. [Ceylon].

Gel. STEREOMITA, Braun 1922.
Entl. News XXXIII 43-14: type *andropogonis*, Braun [Ohio].

Metachand. STEREOPTILA, Meyrick 1917.
Exot. Micr. II 70: type *negatella*, Wlk. [Ceylon].

Schreck. STEREOSTICHA, Meyrick 1913.
Exot. Micr. I 83: type *pilulata*, M. [Ceylon].

Eucosm. STERIPHOTIS, Meyrick 1911.
P. Linn. Soc. N. S. W. XXXVI 259: type *peltophora*, M. [Queensland].

Glyph. Sthenistis, Hampson 1896. (IMMA, Wlk.).
Fauna India, Moths IV 541: type *gyrtoniformis*, Hmp. [Ceylon; S. India].

Eucosm. Stictea, Guenée (*non-descr.*). (ARGYROPLOCE, Hb.).
Ann. S. E. Fr. (2) III 161 (1845): type [*mygindana*, Schiff.=]. *flammeana*, Hb. [Europe; Asia Minor).

Stigm. STIGMELLA, Schrank 1802.
Fauna Boica II, ii, 169: type [*anomalella*, Goeze=] *rosella*, Schr. [Europe].
|| Nepticula, Heyden 1842.

Eucosm. Stigmonota, Stainton 1859. (ENARMONIA, Hb.).
Manual II 244 : type *dorsana*, Fabr. [Europe ; Asia Minor].
Stigmonota, Guenée, Ann. S. E. Fr. (2) III 182 (1845) (*non-descr.*).

Cosm. STILBOSIS, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 170 : type *tesquella*, Clemens [N. & C. America].

Gel. STIPHROSTOLA, Meyrick 1923.
Exot. Micr. III 25 : type *longinqua*, M. [Assam].

Gel. STOEBERHINUS, Butler 1881.
A. M. N. H. (5) VII 402 : type *testacea*, Butl. [Polyesia].

Gel. STOMOPTERYX, Heinemann 1870.
Kleinschmett. Deuts. II i. 324 : type *detersella*, Zeller [S. Europe].
|| Anacampsis [nec Curtis], Hein. 1870, Snellen 1882, etc.
|| Schützeia, Spuler 1910.
? Harpagus, Stephens 1834=.

Lith. STOMPHASTIS, Meyrick 1912.
Wyts Gen. Ins., fasc. 128, p. 19 : type *plectica*, M. [India].

Gel. Stomylia, Snellen 1878. (TITUACIA, Wlk.).
Tijds. Ent. XXII 14 : type [*deviella*, Wlk=] *erosella*, Snellen [Borneo].

Gel. STRENIASTIS, Meyrick 1904
P. Linn. Soc. N. S. W. XXIX 428 : type *thermaea*, Lower (S. E. Australia).

Gel. STRENOPHILA, Meyrick 1913.
Ann. Transv. Mus. III 306 : type *hyptiota*, M. [Transvaal].

Eucosm. Strepsiceros, Meyrick 1881 (*praeocc.*). (SPILONOTA, Stephens).
P. Linn. Soc. N. S. W. VI 678-679 : type *ejectana*, Wlk. [Australia ; New Zealand].

Eucosm. Strepsicrates, Meyrick 1888. (SPILONOTA, Stephens).
Tr. N. Z. Inst. XX 73 : type *ejectana*, Wlk. [Australia ; New Zealand].

Oec. STREPTOTHYRIS, Meyrick 1918.
Ann. Transv. Mus. VI 32 : type *tanyacta*, M. [Natal].

Eucosm. Strobila, Sodsffsky 1837 (*praeocc.*). (EVETRIA, Hb.).
Bull. Mosc. X, No. 6, p. 92 : type *turionella*, Linn [Europe].

Gel. STROBISIA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 164 : type *irridipennella*, Clemens [Atlantic States].
|| Systasiota, Wlsm. 1910.

Eucosm. Strophedra, Herrich-Schäffer 1854. (PAMMENE, Hb.).
Schmett. Eur. V 94 : type [*nitidana*, Fb.=] *flexana*, Zeller [Europe to Japan]

Eucosm. Strophosoma, Herrich-Schäffer 1853 (*praeocc.*). (PAMMENE, Hb.).
Schmett. Eur. V 29, t. 11 ff. 31-33 : type [*nitidana*, Fb.=] *flexana*. Zeller [Europe to E. Siberia and Japan].

Tin. Struthisca, Meyrick 1905. (CTENOCOMPA, Meyrick).
B. J. XVI 614 : type *siderarcha*, M. [Ceylon].

Oec. STRUTHOSCELIS, Meyrick 1913.
T. E. S. 1913, 177 : type *acrobatica*, M. [Peru].

Gel. STRYPHNOCOPA, Meyrick 1920.
Exot. Micr. II 306 : type *trinotata*, M. [Assam].

Tin. STRYPHNODES, Meyrick 1919.
Exot Micr. II 259 : type *styracopa*, M. [Ceylon].

Gel. Styloceros, Meyrick 1904. (SARISOPHORA, Meyr.).
P. Linn. Soc. N. S. W. XXIX 408 : type *cyclonitis*, M. [Queensland].

Eucosm. SULEIMA, Heinrich 1923.
U. S. Nat. Mus. Bull. 123, pp. 155-156, ff. 26, 292 : type *helianthana*, Riley [Texas].

Aeg. SURA, Walker 1856.
Cat. VIII 65 : type *xylocopiformis*, Wlk. [Natal].
Sara, Kirby, Zool. Rec. 1882, 185 (1883) (lapsus).

Ypon. SWAMMERDAMIA, Hübner 1826.
Verz., p. 425 : type [*pyrella*, Vill.=] *cerasiella*. Hb. (Europe)
Swammerdammia, Hein. 1870, Snellen 1882 (*emend.*).

Ypon. Syblis, Guenée 1879. (ATTEVA, Wlk.).
Ann. S. E. Fr. (5) IX 288 : type *fulviguttata*, Zeller [W. Indies].

Oec. Syllochitis, Meyrick 1910. (PSOROSTICHA, Lower).
B. J. XX 462 : type *petraea*, M. [Ceylon].

Aeg Sylphidia, Le Cerf 1911. (EPISANNINA, Aurivillius).
Bull. Paris Mus. XVII 305, f. 4 : type *perlucida*, Le Cerf [Congo].

Gel. SYMBATICA, Meyrick 1910.
Ann. S. Afr. Mus. V 413 : type *cryphias*, M. [Cape Colony].

Gel. SYMBOLISTIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 413-414 : type *orophota*, M. [E. Australia].

Gel. SYMMOCA, Hübner 1826.
Verz., p. 403 : type *signella*, Hb. [Alps].
|| Parasymmoca, Rebel 1903.
|| Paradoris, Meyr. 1907,

Gel. SYMPHANACTIS, Meyrick 1926.
Wyts. Gen. Ins. fasc. 184, p. 101 : type *hetaera*, M [Guiana].

Elach. SYMPHORISTIS, Meyrick 1918.
Ann. Transv. Mus. VI 55 : type *ptychospila*, M. [Transvaal].

Glyph. SYMPHOROSTOLA, Meyrick 1927.
Exot. Micr. III 376 : type *encomias*, M. [Sumatra].

Ypon. Synadia, Walker 1866. (ATTEVA, Wlk.).
Cat. XXXV 1984 : type *flavivitta*, Wlk. [S. America].

Cosm. Synallagma, Engel 1907. (MOMPHA, Hb.).
Entl. News XVIII 277 : type *busckiella*, Engel [N. America].

Aeg. SYNANTHEDON, Hübner 1820.
Verz., p. 129 : type [*vespiformis*, Linn.=] *oestriformis*, Esper [Europe].
|| Trochilia, Hein. 1859.
|| Austrosetia, Felder 1874 (*non-descr*).
|| Pyrrhotaenia, Grote 1875.
|| Carmenta, Hy.– Edw. 1881.

Schreck. Synaphia, Pagenstecher 1900 (*praeocc.*). (PTEROPYGME, Speiser).
Zoologica XXIX 238 : type *pyrrha*, Pag. [Bismarck Isds.].

Ypon. SYNCATHARTIS, Meyrick 1921.
Zool. Meded. VI 187-188 : type *argestis*, M. [Java].

Gel. SYNCATHEDRA, Meyrick 1923.
Exot. Micr. III 37 : type *criminata*, M. [Assam].

Crypt. SYNCHALARA, Meyrick 1917.
Exot. Micr. II 60 : type *rhombota*, M. [N. E. India].

Blast. SYNCOLA, Meyrick 1916.
Exot. Micr. I 597 : type *epaphria*, M. [Ceylon].

Gel. SYNCOPACMA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 72 : type *acrophylla*, M. [Transvaal].

Tin. SYNCRATERNIS, Meyrick 1922.
Exot. Micr. II 590 : type *anthestias*, M. [Brazil].

Lyon. SYNCROBYLA, Meyrick 1915.
T. E. S. 1915, 252 : type *carphota*, M. [Brit. Guiana].

Tortr. Syndemis, Hübner 1826. (TORTRIX, Linn.).
Verz., p. 382 : type *musculana*, Hb. [Europe].

Eucosm. Syndemis, Herrich-Schäffer 1851 (nec Hb.). (EUCOSMA, Hb.)
Schmett. Eur. IV 275 : type *vacciniana*, Zeller [Europe ; Asia Minor].

Gel. SYNDESMICA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 150 : type *homogenes*, Turner [Queensland].

Oec. SYNDROMA, Meyrick 1914.
Exot. Micr. I 271 : type *lignyodes*, M. [Nyasaland].

Glyph. SYNECHODES, Turner 1913.
P. Linn. Soc. N. S. W. XXXVIII 200: type *coniophora*, Turner [N. Queensland].

Gel. Syneuntis, Wallengren 1881. (ARISTOTELIA, Hb.).
Ent. Tidskr. II 95 : type *inopella*, Zeller [Europe].

Phal. SYNGAMONEURA, Mabille 1899.
Ann. S. E. Fr. LXVIII 750 : type *rubronotana*, Mab. [Madagascar].

Gel. SYNGENOMICTIS, Meyrick 1927
Ins. Samoa III 78 : type *aenictopa*, M. [Samoa ; New Hebrides].

Tortr. SYNNOMA, Walsingham 1879.
Ill. Het. B. M. IV 24 : type *lynosyrana*, Wlsm. [California].

Lyon. SYNNYMPHA, Meyrick 1915.
Exot. Micr. I 366 : type *diluviata*, M. [Ceylon].

Crypt. Synomotis, Meyrick 1883. (THYROCOPA, Meyr.).
E. M. M. XX 33 : type *epicapna*, M. [Hawaii].

Cosm. Syntomactis, Meyrick 1888. (PYRODERCES, H. S.).
Tr. N. Z. Inst XX 173 : type *deamatella*, Wlk. [New Zealand].

Oec. SYNTOMAULA, Meyrick 1914.
Exot. Micr. I 235 : type *tephrota*, M. [Ceylon].

Eucosm. Syntozyga, Lower 1901. (POLYCHROSIS, Ragonot).
Tr. R. Soc. S. Austr. XXV 70 : type *psammetalla*, Lower [Queensland].

Cosm. SYNTRETERNIS, Meyrick 1922.
Exot. Micr. II 573-574 : type *xiphodes*, M. [Peru].

Oec. SYRINGOPAIS, Hering 1918.
Iris XXXII 122 : type *temperatella*, Lederer [Palestine].
|| Nochelodes, Meyr. 1920.

Gel. SYRMADAULA, Meyrick 1918.
Ann. Tranv. Mus. VI 26 : type *automorpha*, M. [Transvaal].

Tin. SYRMOLOGA, Meyrick 1919.
Exot. Micr. II 243 : type *leucoclistra*, M. [Colombia].

Oec. SYSCALMA, Meyrick 1920.
Exot. Micr. II 381 : type *prymnaea*, M. [Queensland].

Gel. Systasiota, Walsingham 1910. (STROBISIA, Clemens).
Biol. Centr. Am., Het. IV 28, f. 8 : type *leucura*, Wlsm. [Mexico].

T

Gel. TABERNILLAIA, Walsingham 1911.
Biol. Centr. Am., Het. IV 53-54, f. 14 : type *ephialtes*, Wlsm. [Panama].
Tabernillaea, Meyr., Wyts. Gen. Ins., fasc. 184, p. 85 (1926) (*emend.*).

Tin Tachasara, Walker 1865 (ACROLOPHUS, Poey).
Cat. XXXIV 1151 : type *languidalis*, Wlk. [St. Domingo].

Gel. Tachyptilia, Heinemann 1870. (ANACAMPSIS, Curtis).
Kleinschmett. Deuts. II i, 321 : type *populella*, Clerck [Europe].

Oec. TACHYSTOLA, Meyrick 1914.
Exot. Micr. I 241 : type *thiasotis*, M. [E. Australia].

Glyph. TAENIOSTOLA, Meyrick 1920.
Exot. Micr. II 326-327 : type *celophora*, M. [Brazil].

Oec. Talantis, Meyrick 1888. (MESOLECTA, Meyr.)
P. Linn. Soc. N. S. W. XIII 1601 : type *chimerina*, M. [N. S. Wales].

Tin. TALEPORIA, Hübner 1826.
Verz., p. 400 : type [*tubulosa*, Retz.=] *pseudobombycella*, Hb. [Europe].
Talaeporia, Zeller, Isis XXXII 182 (1839) (*emend.*).
|| Cochleophasia, Curtis 1834.
|| Chersis, Gn. 1845.
|| Tineastra, Stdgr. 1859.
|| Bankesia, Tutt 1900.
|| Deuterotinea, Rebel 1900.

Eucosm. Talponia, Heinrich 1926. (HEMIMENE, Hb.).
U. S. Nat. Mus. Bull. 132, p 19, ff. 114, 286 : type *plummeriana*, Busck [Maryland].

Ypon. Tamarrha, Walker 1864. (ETHMIA, Hb.).
Cat. XXIX 816 : type *nivosella*, Wlk. [Antilles].

Ypon. TANAOCTENA, Turner 1913.
P. Linn. Soc. N. S. W. XXXVIII 204 : type *ooptila*, Turner [N. Queensland].
|| Tanaoctenota, Meyr. 1918.

Ypon. Tanaoctenota, Meyrick 1918. (TANAOCTENA, Turner).
Exot. Micr. II 188 : type *ooptila*, Turner [N. Queensland].

[*Note.*—Proposed to replace *Tanaoctena*, Turner, on the ground that this name is too similar to *Tanaoctenia*, Warren : but these two names are not identical].

Eucosm. Taniva, Heinrich 1926. (ENDOTHENIA, Heinrich).
U. S. Nat. Mus. Bull. 132, pp. 106-107, ff. 50, 189 : type *albolineana*, Kearfott. [N. America].

Oec. TANYARCHES, Meyrick 1924.
Exot. Micr. III 99 : type *glyptocosma*, M. [Moluccas].

Metachand. TANYCHASTIS, Meyrick 1910.
T. E. S. 1910, 371 : type *lysigama*, M. [Mauritius].

Cosm. TANYGONA, Braun 1923.
Tr. Am. Ent. Soc. XLIX 115 : type *lignicolorella*, Braun [Ohio].

Coprom. TANYMECICA, Turner 1916.
Tr. R. Soc. S. Austr. XL 500 : type *xanthoplaca*, Turner [Australia].

[*Note.* Turner (*Tr. R. Soc S. Austr.* XLIX 46 : 1925) suggests that this genus belongs to Glyphipterygidae].

Tin. TANYMITA, Turner 1923.
Tr. R. Soc. S. Austr. XLVII 192 : type *hypomacra*, M. [Queensland].

Oec. TANYZANCLA, Meyrick 1918.
Exot. Micr. II 218 : type *marionella*, Newman [Australia].

Gel. TAPHROSARIS, Meyrick 1922.
T. E. S. 1922, 104 : type *malthacopa*, M. [Brazil : Guiana].

Metachand. TARAGMARCHA, Meyrick 1910.
T. E. S. 1910, 370 : type *laqueata*, M. [Mauritius].

Ypon. TARPHYSCELIS, Meyrick 1913.
Exot. Micr. I 144 : type *palaeota*, M. [Assam.].

Aeg. Tarsa, Walker 1856. (PARANTHRENE, Hb.).
Cat. VIII 61 : type [*asilipennis*, Bdv.—] *bombyciformis*, Wlk. [Atlantic States].

Aeg. TARSOPODA, Butler 1874.
A. M. N. H. (4) XIV 410 : type *remipes*. Butler [Brazil].

Oec. TARUDA, Walker 1864.
Cat. XXIX 799 : type *cuneatella*, Wlk. [Brazil].
|| Ecliptoloma, Zeller 1877.

Gel. TAYGETE, Chambers 1873.
Canad. Ent. V 229 : type *attributella*, Wlk. [Atlantic States].

[*Note.*—*Taygete* is sunk by some authors as homonymous with *Taygetis* Hb. 1818, but the two names are not identical]

|| Epithectis, Meyr. 1895.

Cosm. Tebenna, Hübner 1826. (MOMPHA, Hb.).
Verz., p. 414 : type *festivella*, Schiff. [Europe].

Gel. TECHNOGRAPHA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, pp. 207-208 : type *ephestris*, M. [Ceylon].

Gel. TECIA, Strand 1911.
Bert. ent. Zeit. LV 165 : type *mendozella*, Strand [Argentina].
|| Fapua, Strand 1911.
|| Lata, Strand 1911.

Blast. TECMERIUM, Walsingham 1907.
E. M. M. XLIII 215-216 : type *anthophaga*, Stdgr. [S. W. Europe].

? TEERAHNA, Lucas 1901.
P. Soc. Queensl. XVI 93 : type *regifica*, Lucas [Queensland].
[*Note.* – Reference not available : perhaps not a Micro].

Incurv. TEGETICULA, Zeller 1873.
Verh. z.-b. Ges. Wien. XXIII 232 : type [*yuccasella*, Riley=] *alba*, Zeller [U. S. America].
|| Pronuba, Riley 1872 (*praeocc.*).
|| Prodoxus, Riley 1880.
|| Valentinia, Coolidge 1909 (*praeocc.*).

Glyph. Tegna, Walker 1866. (PHYCODES, Guenée).
Cat. XXXV 1809 : type [*radiata*, Ochs.=] *hyblaeella*, Wlk. [India].

Tin. TEICHOBIA, Herrich-Schäffer 1853.
Schmett. Eur. V 53 : type *verhuellella*, Stainton [Europe].
|| Psychoides, Bruand 1853.
|| Lamprosetia, Stainton 1854.

Ypon. Teinoptila, Sauber 1902. (YPONOMEUTA, Latreille).
Semper, Schmett. Philipp. II 701 : type *interruptella*, Sauber [Philippines ; Papua].

Aeg. Teinotarsina, Felder 1874. (CONOPIA, Hb.).
Reise Novara, Lep. II 26 : type *longipes*, Felder [Amboina].

Gel. Telea, Stephens 1834. (RECURVARIA, Hw.).
Ill. Brit. Ent., Haust. IV 244-245 : type *leucatella*, Clerck [Europe; Asia Minor].

Crypt. TELECRATES, Meyrick 1890.
Tr. R. Soc. S. Austr. XIII 61 : type *laetiorella*, Wlk. [E. and S. Australia].

Tortr. Teleia, Hübner 1826. (PERONEA, Curtis).
Verz., p. 385 : type *abietana*, Hb. [Europe].

Gel. Teleia, Heinemann 1870 (*praeocc.*). (TELPHUSA, Chambers).
Kleinschmett. Deuts. II i, 272-273 : type *vulgella*, Hb. [Europe.

Aeg. TELEOSPHECIA, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 280 : type *unicolor*, Wlk. [=*bibio*, Le Cerf] [Bolivia].

Gel. TELEPHATA, Meyrick 1916.
Exot. Micr. I 592-593 : type *cheramopis*, M. [New Guinea].

Amphith. TELETHERA, Meyrick 1913.
Exot. Micr. I 155 : type *blepharacma*, M. [Ceylon].

Gel. TELEPHILA, Meyrick 1923.
Exot. Micr. II 626 : type *schmidiella*, Heyden [Europe].

Gel. TELPHUSA, Chambers 1872.
Canad. Ent. IV 132 : type *longifasciella*, Clemens [Atlantic States].
|| Teleia, Heinemann 1870 (*praeocc.*).
|| Adrasteia, Chambers 1872.
|| Xenolechia, Meyr. 1895.
|| Geniadophora, Wlsm. 1897.

Eperm. TEMELUCHA, Meyrick 1909.
Ann. Trsnsv. Mus. II 25 : type *xeropa*, M. [S. Africa].

Eucosm. Temnolopha, Lower 1901. (ARGYROPLOCE, Hb.).
Tr. R. Soc. S. Austr. XXV 72 : type *mosaica*, Lower [Queensland].

Tin. TENAGA, Clemens 1862.
Proc. E. S. Philad. I 135 : type *pomiliella*, Clemens [Pennsylvania].

Lyon. TEPHROSARA, Meyrick 1915.
Tr. N. Z. Inst. XLVII 234 : type *cimmeria*, M. [New Zealand].

Tortr. Teras, Treitschke 1830. (PERONEA, Curtis).
Schmett. Eur. VIII 247 : type *caudana*, Fb. [Europe].

Tortr. Teratodes, Guenée (*non-descr.*) (*praeocc.*). (EPAGOGE, Hb.).
Ann. S. E. Fr. (2) III 168 (1845) : type *favillaceana*, Hb. [Europe].

Oec. Teratomorpha, Turner 1896. (TONICA, Wlk.).
Tr. R. Soc. S. Austr. XX 20 : type [*effractella*, Snellen=] *coeliota*, Turner [Queensland.]

Oec. Teratomorpha, Walsingham 1912 (*praeocc.*). (TRYCHERODES, Meyr.).
Biol. Centr. Am., Het. IV 127 : type *albifrons*, Wlsm. [C. America].

Oec. TERATOPSIS, Walsingham 1881.
T. E. S. 1881, 259 : type *tunicella*, Wlsm. [S. Africa].

Tortr. TERTHREUTIS, Meyrick 1918.
Exot. Micr. II 170 : type *sphaerocosma*, M. [Sikkim ; Assam].

Oec. TERTHROTICA, Meyrick 1914.
Exot. Micr. I 231 : type *macrophaea*, M. [S. India].

Cosm. Tetanocentria, Rebel 1902. (BATRACHEDRA, H. S.).
Berl. Ent. Zeit. XLVII 107 : type *gelechiella*, Rebel [Greece].

Glyph. TETRACMANTHES, Meyrick 1925.
Exot. Micr. III 136 : type *astrocosma*, M. [Natal].

Aluc. TETRASCHALIS, Meyrick 1887.
T. E. S. 1887, 267 : type *arachnodes*, M. [Australia].

Gel. TEUCHOPHANES, Meyrick 1914.
T. E. S. 1914, 274 : type *leucopleura*, M. [Brit. Guiana].

Gel. TEUCRODOXA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 206 : type *spiculifera*, M. [Ceylon].

Crypt. THALAMARCHIS, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 435 : type *alveola*, Felder [W. Australia].

Cosm. Thalerostoma, Meyrick 1917. (LIMNAECIA, Stainton).
Exot. Micr. II 42 : type *orthocentra*, M. [Nilgiris].

Oec. THALEROTRICHA, Meyrick 1884.
P. Linn. Soc. N. S. W. IX 741 [? 1885] : type *mylicella*, M. [Australia].
Thalerotricha, Meyr., P. Linn. Soc. N. S. W. VII 419 (1883) [Invalid : no associated species].

Tin. THALLOSTOMA, Meyrick 1913.
Tr. N. Z. Inst. XLV 28-29 : type *eurygrapha*, M. [New Zealand].

Plut. THAMBOTRICHA, Meyrick 1922.
Entom. LV 270 : type *vates*, M. [New Zealand].

Oec. THAMNOCRANA, Meyrick 1927.
Exot. Micr. III 382-383 : type *haemorrhoa*, M. [Natal].

Oec. THAMNOSARA, Meyrick 1884.
Tr. N. Z. Inst. XVI 27 : type [*sublitella*, Wlk.=] *chirista*, M. [New Zealand].

Aeg. Thamnosphecia, Spuler 1910. (CONOPIA, Hb.).
Schmett. Eur. II 308 : type *culiciformis*, Linn. [Europe].

Tin. Thapava, Walker 1864. (MELASINA, Bdv.).
Cat. XXX 995 : type [*primella*, Zeller=] *natalana*, Wlk. [Natal].

Glyph. Thaumatographa, Walsingham 1897. (HILAROGRAPHA, Zeller).
T. E. S. 1897, 52 : type *zapyra*, M. [New Guinea].

Oec. THAUMATOLITA, Walsingham 1912.
Biol. Centr. Am., Het. IV 117, f. 26 : type *hamifera*, Wlsm. [Mexico].

Crypt. Theatria, Walsingham 1912. (ODITES, Wlsm.).
Biol. Centr. Am., Het. IV 116, f. 25 : type *spudasma*, Wlsm. [Panama].

Tin. Theatrista, Meyrick 1917. (NOMIMA, Durrant).
Exot. Micr. II 95 : type *subnigrata*, M. [E. Africa].

Oec. Theatrocopia, Walsingham 1897. (CRYPTOLECHIA, Zeller).
T. E. S. 1897. 43 : type *roseoviridis*, Wlsm. [W. Africa].

Tin. THEATROCHORA, Meyrick 1921.
Ann. Transv. Mus. VIII 128 : type *cosmophanes*, M. [Natal].

Ypon. THECOBATHRA, Meyrick 1922.
Exot. Micr. II 553 : type *acropercna*, M. [Khasis].

Cosm. THECTOPHILA, Meyrick 1927.
Tr. N. Z. Inst. LVII 701 : type *acmotypa*, M. [New Zealand].

Gel. Theisoa, Chambers 1874. (HELICE, Chambers).
Canad. Ent. VI 75 : type [*constrictella*, Zeller =] *bifasciella*, Chambers [Texas].

Glyph. THELETHIA, Dyar 1893.
Canad. Ent. XXV 301 : type *extranea*, Hy-Edwards. [Arizona].
|| Thia, Hy.-Edw. 1888 (*praeocc.*).

Gel. THELYASCETA, Meyrick 1923.
Exot. Micr. III 27 : type *nonstrigella*, Chambers. [N. America].

Oec. Thema, Walker 1864. (PLEUROTA, Hb.).
Cat. XXIX 801-802 : type *brevivitella*, Wlk. [E. Australia].

Tin. THEMELIOTIS, Meyrick 1910.
T. E. S. 1910. 476 : type *stereodes*, M. [New Guinea].

Ypon. Themiscyra, Walker 1864. (LACTURA, Wlk.).
Cat. XXXI 258 : type *laetifera*, Wlk. [Queensland].

Ypon. Theoxenia, Walsingham 1887. (ETHMIA, Hb.).
Moore's Lep. Ceylon III 506 : type *hilarella*, Wlk. (Ceylon).

Metachand. THERAPNIS, Meyrick 1910.
B. J. XX 145 : type *parorma*, M. [Ceylon].

Ypon THEREUTIS, Meyrick 1892.
P. Linn. Soc. N. S. W. XVII 594-595 : type *schismatica*, M. [N. S. Wales].

Plut. Theristis, Hübner 1826. (YPSOLOPHUS, Fb.).
Verz., p. 406 : type [*mucronella*, Scop.=] *acinacidella*, Hb. [Europe].

Glyph. Thia, Henry-Edwards 1888 (*praeocc.*). (THELETHIA, Dyar).
Ent. Amer. III 181 : type *extranea*, H.-Edw. [N. America].

Eucosm. Thiodia, Hübner 1826. (EUCOSMA, Hb.).
Verz., p. 391 : type *citrana*, Hb. [Europe to Turkestan].

Gel. THIOGNATHA, Meyrick 1920.
Voyage Alluaud Afr. Orient. II 74: type *metachalca*, M. [Brit. E. Africa].

Crypt. THIOSCELIS, Meyrick 1909.
T. E. S. 1909. 29-30: type *directrix*, M. [S. America].

Gel. THIOTRICHA, Meyrick 1886.
Tr. N. Z. Inst. XVIII 164: type *thorybodes*, M. [New Zealand].

Eucosm. Thirates, Treitschke (*non-descr.*). (ARGYROPLOCE, Hb.).
Schmett. Eur. VII 233 (1829): type *profundana*, Fb. [Europe].

Tin. THISIZIMA, Walker 1864.
Cat. XXIX 820: type *ceratella*, Wlk. [Moulmein].

Gel. THOLEROSTOLA, Meyrick 1917.
T. E. S. 1917. 10: type *omphalopa*, M. [Ecuador].

Lyon. THOMICTIS, Meyrick 1920.
Exot. Micr. II 289: type *ephorista*, M. [Brit. Guiana].

Tin. Thranitica, Meyrick 1908. (NARYCIA, Stephens).
P. Z. S. 1908. 743: type *hemicopa*, M. [S. Africa].

Schreck. THRASYDOXA, Meyrick 1912.
Exot. Micr. I 60: type *tyrocopa*, M. [Colombia].

Schreck. THRIAMBEUTIS, Meyrick 1910.
T. E. S. 1910. 470: type *hemicausta*, M. [Solomon Isds.].

Tortr. Thrincophora, Meyrick 1881. (ACROPOLITIS, Meyr.).
P. Linn. Soc. N. S. W VI 430-431: type *impletana*, Wlk. [Australia].

Gel. THRIOPHORA, Meyrick 1911.
Ann. Transv. Mus. II 231: type *oculata*, M. [Transvaal].

Tin. THROMBOGENES, Meyrick 1921.
Ann. Transv. Mus. VIII 137: type *selmatarcha*, M. [Cape Colony].

Gel. THRYPSIGENES, Meyrick 1914.
T. E. S. 1914. 272: type *colluta*, M. [Brit. Guiana].

Gel. THUBANA, Walker 1864.
Cat. XXIX 814: type *bisignatella*, Wlk. [Borneo].
|| Tiva, Wlk. 1864.
|| Inapha, Wlk. 1864.

Oec. THUDACA, Walker 1864.
Cat. XXIX 825: type *obliquella*, Wlk. [N. S. Wales].

Oec. THYESTARCHA, Meyrick 1912.
Ann. S. Afr. Mus. X 64-65: type *edax*, M. [S. Africa].

Glyph. Thylacopleura, Meyrick 1886. (IMMA, Wlk.).
T. E. S. 1886. 284 : type *autodoxa*, M. [Fiji].

Schreck. THYLACOSCELES, Meyrick 1889.
Tr. N. Z. Inst. XXI 171 : type *acridomima*, M. [New Zealand].

Gel. THYMBRITIS, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 230 : type *molybdias*, M. [Ceylon].

Crypt. THYMIATRIS, Meyrick 1907.
B. J. XVII 738 : type *melitacma*, M. [Assam].

Gel. THYMOSOPHA, Meyrick 1914.
Ann. S. Afr. Mus. X 244-245 : type *antileuca*, M. [Cape Colony].

Phal. Thyralia, Walsingham 1897. (PHALONIA, Hb.).
P. Z. S. 1897. 138-139 : type *buntcana*, Robinson [U. S. America ; W. Indies].

Aeg. THYRANTHRENE, Hampson 1919.
Nov. Zool. XXVI 97 : type *obliquizona*, Hmp. [Rhodesia].

Ypon. THYRIDECTIS, Meyrick 1886.
P. Linn. Soc. N. S. W. XI 1046 : type *psephonoma*, M. [N. S. Wales].

Crypt. THYROCOPA, Meyrick 1883.
E. M. M. XX 32-33 : type [*abusa*, Wlsm.=] *usitata*, M. nec Butl. [Hawaii].
|| Synomotis, Meyr. 1883.
|| Catamempsis, Wlsm. 1907.
|| Psychra, Wlsm. 1907.

Oec. THYROMORPHA, Turner 1917.
Tr. R. Soc. N. S. W. XLI 108 : type *stibaropis*, Turner [Queensland].

Oec. Thyrsopala, Meyrick (*invalid*).
P. Linn. Soc. N. S. W. VII 420 (1883) [Invalid ; no associated species].
P. Linn. Soc. N. S. W. IX 721 (1884) (? 1885) [Sunk as based on error].

Gel. THYRSOSTOMA, Meyrick 1907.
B. J. XVII 736 : type *glaucitis*, M. [India].

Ypon. THYRSOTARSA, Meyrick 1921.
Zool. Meded. VI 188 : type *platybyrsa*, M. [Java].

Tin. Thysanoscelis, Walsingham 1887. (ACROLOPHUS, Poey).
T. E. S. 1887. 145-146 : type *hirsutus*, Wlsm. [Brazil].
Thysanoskelis, Wlsm, T. E. S. 1887. 140 [*lapsus*].
Thysanoscedes, Druce, A. M. N. H. (7) VII 441 (1901) [*lapsus*].

Crypt. THYSIARCHA, Meyrick 1925.
Exot. Micr. III 146 : type *ecclesiastis*, M. [Victoria].

Eucosm. Tia, Heinrich 1926 (ENDOTHENIA, Heinrich).
U. S. Nat. Mus. Bull. 132, p. 108, ff. 53, 195 : type *vulgana*, McDunnough [Canada].

Oec. Tichonia, Hübner 1826. (DEPRESSARIA, Hw.).
Verz., p. 412 : type *atomella*, Schiff. [Europe].

Eperm. Tichotripis, Hübner 1826. (EPERMENIA, Hb.).
Verz., p. 425 : type [*chaerophylella*, Goeze=] *testaceella*, Hb. [Europe].

Oec. Tigava, Walker 1864 (*praeocc.*). (LEISTARCHA, Meyr.).
Cat. XXIX 807 : type *scitissimella*, Wlk. [S. E. Australia].

Tin. TIMAEA, Walker 1863.
Cat. XXVIII 520-521 : type *bivittatella*, Wlk. [N. S. Wales].
|| Manliana, Wlk. 1864.

Crypt. TIMOCRATICA, Meyrick 1912.
T. E. S. 1911. 706-707 : type *isographa*, M. [Venezuela].

Lith. TIMODORA, Meyrick 1886.
T. E. S. 1886. 295 : type *chrysochroa*, M. [Tonga].

Gel. TIMYRA, Walker 1864.
Cat. XXIX 782-783 : type *phycisella*, Wlk. [Ceylon].
|| Decuaria, Wlk. 1864.
|| Uipsa, Wlk. 1864.

Schreck. TINAEGERIA, Walker 1856.
Cat. VIII 260-261 : type *ochracea*, Wlk. [Brazil ; Colombia].

Dougl. TINAGMA, Zeller 1839.
Isis XXXII 204 : type *perdicellum*, Zeller. [Europe].

Tin. TINEA, Linnaeus 1758.
Syst. Nat. (ed. X) I 496 : type *pellionella* Linn. [Cosmopolitan].
|| Nemapogon, Schrank 1802.
|| Ses, Hübner 1806 (*non-descr.*).
|| Brosis, Hb. 1806 (*non-descr.*).
|| Autoses, Hb. 1826.
|| Acedes, Hb. 1826.
|| Diaphthirusa, Hb. 1826.
|| Cephimallota, Bruand 1847.
|| Edosa, Wlk. 1866.
|| Chrysoryctis, Meyr. 1886.
|| Perissomastix, Warren 1905.
|| Tryptodema, Dietz 1905.

Tin. Tineastra, Staudinger 1859. (TALEPORIA, Hb.).
Stett. Ent. Ztg. XX 236 : type *paradoxella*, Stdgr. [S. Europe].

Tin. ? † TINEITES, Kawall 1877.
Bull. Soc. Mosc. 1876. 171-172 : type † *crystalli*, Kawall [Siberia ; fossil, in " Bergkrystall "].

Tin. TINEOLA, Herrich-Schäffer 1853.
Schmett. Eur. V 23, t. 4 f. 30, t. 10 ff. 24-26 : type *bisselliella*, Hummel [Cosmopolitan].

Tin. TINEOMIMA, Staudinger 1892.
Iris V 391 : type *kenteella*, Stdgr. [S. E. Siberia].

Oec. Tingena, Walker 1864. (BORKHAUSENIA, Hb.).
Cat. XXIX 809-810 : type [*apertella*, Wlk.=] *bifaciella*, Wlk. [New Zealand].

Gel. Tingentera, Walker 1864. (TISIS, Wlk.).
Cat. XXIX 798 : type *meliorella*, Wlk. [Borneo].

Tin. TINISSA, Walker 1864.
Cat. XXIX 780 : type *torvella*, Wlk. [Borneo to India].

Aeg. TINTHIA, Walker 1864.
Cat. XXXI 23 : type *varipes*, Wlk. [Celebes].
|| Soronia, Moore 1877 (*praeocc.*).
|| Ceratocorema, Hmp. 1893.

Gel. Tipasa, Walker 1864 (*praeocc.*). (FRISILIA, Wlk.).
Cat. XXIX 804-805 : type [*nesciatella*, Wlk.=] *busaliella*, Wlk. [Ceylon].

Gel. Tipha, Walker 1864. (TISIS, Wlk.).
Cat. XXIX 798-799 : type *chalybaeella*, Wlk. [Borneo].

Aeg. TIPULAMIMA, Holland 1894.
Jl. N. Y. Ent. Soc. I 183 : type *flavifrons*, Holland. [W. Africa].
|| Macrotarsipodes, Le Cerf 1917.

Tin. TIQUADRA, Walker 1863.
Cat. XXVIII 519 : type *inscitella*, Wlk. [Mexico].
|| Oscella, Wlk. 1864.
|| Manchana, Wlk. 1866.
|| Ventia, Wlk. 1866.
|| Acureuta, Zeller 1877.

Gel. Tirallis, Walker 1864. (TISIS, Wlk.).
Cat. XXIX 806 : type [*chalybaeella*, Wlk.=] *latifasciella*, Wlk. [Borneo].

Gel. TIRANIMIA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 334, f. 7 : type *epidolella*, Chrétien [Algeria].

Tin. Tirasia, Walker 1863. (ACROLOPHUS, Poey).
Cat. XXVIII 512-513 : type *granulatella*, Wlk. [Brazil].

Gel. Tirasia, Walker 1864 (*praeocc.*). (LECITHOCERA, H. S.).
Cat. XXIX 817-818 : type *punctigeneralis*, Wlk. [Borneo]

Aeg. Tirista, Walker 1864. (PARANTHRENE, Hb.).
Cat. XXXI 22 : type *argentifrons*, Wlk. [Mexico].

Gel. Tiriza, Walker 1864. (LECITHOCERA, H. S.).
Cat. XXIX 790 : type *leucotella*, Wlk. [Borneo].

Lyon. TISCHERIA, Zeller 1839.
Isis XXXII 214, 219 : type *complanella*. Hb. [Europe, N. Africa].
|| Evexia, Gistel 1848.
|| Philodoxa, Gistel 1848 (*nom. nud.*).
|| Coptotriche, Wlsm. 1890.

Crypt. Tisdra, Walker 1864. (ACRIA, Stephens).
Cat. XXIX 830-831 : type *obtusella* Wlk. [Borneo].

Gel. TISIS, Walker 1864.
Cat. XXIX 793 : type *bicolorella*, Wlk. [Borneo].
|| Tonosa, Wlk. 1864.
|| Tingentera, Wlk. 1864.
|| Tipha, Wlk. 1864.
|| Tirallis, Wlk. 1864.
|| Cacogamia, Snellen 1903.

Oec. TISOBARICA, Walker 1864.
Cat. XXIX 812-813 : type *jucundella*, Wlk. [E. Australia].
|| Hieropola, Meyr. 1883.

Tin. Tissa, Walker 1863. (MELASINA, Bdv.).
Cat. XXVIII 513 : type [*primella*, Zeller =] *inquinatalis*, Wlk. [S. Africa].

Gel. Titana, Walker 1864. (LECITHOCERA, H. S.).
Cat. XXIX 813 : type *adelella*, Wlk. [Borneo].

Tin. TITANOMIS, Meyrick 1888.
Tr. N Z Inst. XX 104 : type *sisyrota*, M. [New Zealand].

Aluc. TITANOPTILUS, Hampson 1905.
T. E. S. 1905. 248, fig. : type *melanodonta*, Hmp. [E. Africa].

Gel. TITUACIA, Walker 1864.
Cat. XXIX 812 : type *deviella*, Wlk. [Borneo].
|| Stomylia, Snellen 1878.

[Noctuidae. Titulcia, Walker 1864.
Cat. XXIX 810 : type *eximia*, Wlk. [Borneo].
" Allied to *Oecophora* " (Walker), but is not a Micro.]

Gel. Tiva, Walker 1864. (THUBANA, Wlk.).
Cat. XXIX 821-822 : type [*bisignatella*, Wlk.=] *binotella*, Wlk. [Borneo ; Formosa].

Tin. TOCASTA, Busck 1912.
Smithson. Misc. Coll. LIX, Pub. 2079, p. 4 : type *priscella*, Busck. [Panama].

Eucosm. Tmetocera, Lederer 1859. (SPILONOTA, Stephens).
Wien. Ent. Mon. III 367 : type *ocellana*, Fb. [Europe].

Gel. TOCMIA, Walker 1864.
Cat. XXIX 805 : type *versicolorella*, Wlk. [Brazil].

Ypon. TOECORHYCHIA, Butler 1883.
T. E. S. 1883. 74 : type *cinerea*, Butler [Chile].

Gel. TOGIA, Walker 1864.
Cat. XXIX 791 : type *nemophorella*, Wlk. [Borneo].

Ypon. TOIANA, Walker 1866.
Cat. XXXV 1732 : type *venosella*, Wlk. [Borneo].

Aeg. TOLERIA, Walker 1864.
Cat. XXXI 19-20 : type *abiaeformis*, Wlk. [N. China].

[Noctuidae. Tolpia, Walker 1863.
Cat. XXVIII 449 : type *conscitulana*, Wlk. (Borneo)].

Tin. TOMARA, Walker 1864.
Cat. XXIX 809 : type *tigrinella*, Wlk. [Borneo].

Oec. TONICA, Walker 1864.
Cat. XXIX 788 : type *terasella*, Wlk. [Borneo].
|| Binsitta, Wlk. 1864.
|| Teratomorpha, Turner 1896.
|| Cononia, Snellen 1901.

Tin. Tonicurgis, Meyrick 1921. (SCHEDIASTIS, Meyr.).
Exot. Micr. II 603 : type *diaphracta*, M. [Palestine].

Gel. Tonosa, Walker 1864. (TISIS, Wlk.).
Cat. XXIX 796 : type *seclusella*, Wlk. [Borneo].

Plut. TONZA, Walker 1864.
Cat. XXX 1011 : type *purella*, Wlk. [N. S. Wales].

Aeg. TOOSA, Walker 1856.
Cat. VIII 64 : type *glaucopiformis*, Wlk. [S. Africa].
|| Ninia, Wlk. 1856.
|| Cicinnocnemis, Holland 1894.

[Noctuidae. TOPADESA, Moore 1888.
Lep. Atk., p. 280 : type *sanguinea*, Moore [Sikkim].
Note. Described as a Tortricid, but is a Noctuid.]

Glyph. Topaza, Walker 1864. (IMMA, Wlk.).
Cat. XXIX 808 : type *alienella*, Wlk. [Borneo].

Oec. TOPEUTIS, Hübner 1826.
Verz., p. 366 : type *labiosella*, Hb. [S. E. Europe].
Note. Hampson has used *Topeutis* in the sense of *Scirpophaga* (Pyralidae) but Zeller (*Isis* XXXII 190 : 1839) restricted its usage to *labiosella*.

Crypt. ? TOPIRIS, Walker 1863.
Cat. XXVIII 521-522 : type *candidella*, Wlk. [Sarawak].
[*Note.*—Unidentifiable : Meyrick notes (*in litt.*, May 1927) that he has "twice examined the type, which may be an *Athrypsiastis*, but has been mended by having the hindwings of *Hyponomeuta* attached; better neglected."]

[Pyralidae. TORDA, Walker 1863.
Cat. XXVIII 436-437 : type *penicillana*, Wlk. [Brazil].

Tin. Torna, Walker 1863. (MELASINA, Bdv.).
Cat. XXVIII 517 : type *invariella*, Wlk. [N. India].

Gel. TORNODOXA, Meyrick 1921.
Exot. Micr. II 432 : type *tholochorda*, M. [Japan].

Gel. TORODORA, Meyrick 1894.
T. E. S. 1894. 16 : type *characteris*, M. [Burma].

Schreck. TORTILIA, Chrétien 1908.
Bull. S. E. Fr. 1908. 201 : type *flavella*, Chrétien [Algeria].

Tortr. TORTRICODES, Stainton 1859.
Manual II 278 : type *tortricella*, Hb. [Europe].
Tortricodes, Guenée, Ann. S. E. Fr. (2) III 305 (1845) (*non-descr.*).
|| Oporinia, Hb. 1826 (*praeocc.*).
|| Cheimatophila (nec Steph.), H. S. 1851, Meyr. 1895, Rebel 1901.
|| Oxypteron, Stdgr. 1871.
|| Gynoxypteron, Speiser 1902.

Glyph. Tortricomorpha, Felder 1861. (IMMA, Wlk.).
Sitz. Akad. Wiss. Wien. 1861, p. 43 : type *atrosignata*, Felder [Moluccas].

Oec. TORTRICOPSIS, Newman 1855.
T. E. S. (2) III 293 : type [*uncinella*, Zeller=] *rosabella*, Newman [E. Australia ; Tasmania].

Tortr.. TORTRIX, Linnaeus 1758.
Syst. Nat. (ed. X) I 496 : type *viridana*, Linn. [Europe].
|| Syndemis, Hb. 1826.
|| Amelia, Hb. 1826.
|| Aphelia, Hb. 1826.

|| Aleimma, Hb. 1826.
|| Lozotaenia, Steph. 1834.
|| Dictyopteryx, Steph. 1834.
|| Clepsis, Stainton 1858.
|| Choristoneura, Led. 1859.
|| Heterognomon, Led. 1859.
|| Smicrotes, Clemens 1860.
|| Pararrhaptica, Wlsm. 1907.
?|| Brachygonia, Wlsm. 1900.

Glyph. TORTYRA, Walker 1863.
Cat. XXVIII 510 : type *spectabilis*, Wlk. [Brazil].
|| Saptha, Wlk. 1864.
|| Badera, Wlk. 1866.
|| Choregia, Zeller 1877.
|| Chordates, Snellen 1877.
|| Walsinghamia, Riley 1889.

[Pyralidae. TOSALE, Walker 1863.
Cat. XXVIII 147 : type *pyralioides*, Wlk. [Brazil)].

Gel. TOSCA, Heinrich 1920.
Proc. U. S. Nat. Mus. LVII 65 : type *plutonella*, Heinrich [New Mexico].

[Lithosiadae. TOSPITIS, Walker 1863.
Cat. XXVIII 426 : type *nulliferana*, Wlk. (Borneo)].

Tin. TOXALIBA, Walker 1863.
Cat. XXVIII 516 : type *reductella*, Wlk. [Nepal].

Gel. Toxoceras, Chrétien 1915. (MEGACRASPEDUS, Zeller).
Ann. S. E. Fr. LXXXIV 329, f. 5 : type *violacella*, Chrétien. [Algeria].

Plut. Trachoma, Wallengren 1880. (YPSOLOPHUS, Fb.).
Ent. Tidskr. I 62 : type *asperella*, Linn. [*Europe].

Tortr. Trachybathra, Meyrick 1907. (HARMOLOGA, Meyr.).
Tr. N. Z. Inst. XXXIX 114 : type *scoliastis*, M. [New Zealand].

Phal. TRACHYBYRSIS, Meyrick 1927.
Exot. Micr. III 368 : type *euglypta*, M. [Belgian Congo].

Tin. TRACHYCENTRA, Meyrick 1886.
T. E. S. 1886. 288 : type *calamias*, M. [Tonga ; Fiji].

Cosm. TRACHYDORA, Meyrick 1897.
P. Linn. Soc. N. S. W. XXII 390 : type *illustris*, M. [E. Australia].
|| Anataractis, Meyr. 1916.

Oec. TRACHYNTIS, Meyrick 1888.
P. Linn. Soc. N. S. W. XIII 1586: type *delophanes*, M. [W. Australia].

Oec. TRACHYPEPLA, Meyrick 1883.
P. Linn. Soc. N. S. W. VIII 367-368: type *euryleucota*, M. [New Zealand].
Trachypepla, Meyr., P. Linn. Soc. N. S. W. VII 423 (1883) [Invalid ; no associated species].

Tortr. Trachyptila, Turner 1916. (PALAEOTOMA, Meyr.).
Tr. R. Soc. S. Austr. XL 519: type [*styphelana*, M.=] *melanosticha*, Turner. [Australia].

Tin. TRACHYRRHOPALA, Meyrick 1926.
Sarawak Mus. Jl. III 167-168: type *pauroleuca*, M. [Borneo].

Eucosm. TRACHYSCHISTIS, Meyrick 1921.
Exot. Micr. II 448: type *hians*, M. [Queensland].

Tortr. Trachysmia, Guenée (*non-descr.*). (CNEPHASIA, Curtis).
Ann. S. E. Fr. (2) III 161 (1845): type *rigana*, Sodoffsky. [Europe ; Siberia].

Oec. TRACHYXYSTA, Meyrick 1916.
Exot. Micr. I 552: type *antichroma*, M. [Australia].

Oec. TRACHYZANCLA, Turner 1917.
Tr. R. Soc. S. Austr. XLI 79: type *histrica*, Turner. [W. Australia].

Aeg. TRADESCANTICOLA, Hampson 1919.
Novit. Zool. XXVI 64: type *uniformis*, Snellen. [Java].

Glyph. Trapeziophora, Walsingham 1892. (USSARA, Wlk.).
P. Z. S. 1891. 529-530: type *gemmula*, Wlsm. [W. Indies].

Carp. TREPSITYPA, Meyrick 1913.
Exot. Micr. I 72-73: type *cardinata*, M. [Guiana].

Tin. TRETOSCOPA, Meyrick 1916.
Exot. Micr. I 606-607: type *polycentra*, M. [Nyasaland].

Elach. Triboloneura, Walsingham 1908. (MENDESIA, Joannis).
E. M. M. XLIV 54: type *sepulchrella*, Stainton. [Europe].

Gel. TRICHEMBOLA, Meyrick 1918.
Exot. Micr. II 115: type *segnis*, M. [India].

Crypt. Trichernis, Meyrick 1894. (ODITES, Wlsm.).
T. E. S. 1894. 20: type *centrias*, M. [Ceylon ; India ; Burma].

Crypt. TRICHLOMA, Lower 1902.
Tr. R. Soc. S. Austr. XXVI 238-239: type *asbolophora*, Lower. [Victoria].

Aeg. ? TRICHOBAPTES, Holland 1894.
Jl. N. Y. Ent. Soc. I 184 : type [*auristrigata*, Plötz=] *sexstriata*. Holland. [W. Africa].

[*Note.* Holland's figure certainly does not look like that of an Aegeriad ; perhaps a Zygaenid?]

Aeg. TRICHOCEROTA, Hampson 1893.
Fauna India, Moths I 199 : type *ruficincta*, Hmp. [Burma].
Trichocerata, dalla Torre & Strand, Cat. Lep. Aeg., p. 183 (1926) (*lapsus*).
|| Microsphecia, Bartel 1912.

Ypon. TRICHOCIRCA, Meyrick 1920.
Voyage Alluaud Afr. Orient., Lep. pp. 85-86 : type *tyrota*, M. [E. Africa].

Oec. TRICHOMOERIS, Meyrick 1913.
Exot. Micr. I 156 : type *amphichrysa*, M. [N. Australia].

Tin. TRICHOPHAGA, Ragonot 1894.
Ann. S. E. Fr. 1894, p. 123 : type [*su nhoei*, Butler=] *coprobiella*, Ragonot. [N. E. Africa ; Syria].

Aluc. TRICHOPTILUS, Walsingham 1880.
Pteroph. Calif. Oregon, pp. 62-63 : type *pygmaeus*, Wlsm. [U. S. America].
|| Buckleria, Tutt 1905 (*non-descr.*).
|| Stangeia, Tutt 1908 (*non-descr.*).

Adel. TRICHORRHABDA, Meyrick 1912.
Wyts. Gen. Ins., Adel. p. 3 : type *fasciolata*, Butler. [S. America].

Ypon. Trichostibas, Zeller 1863. (URODUS, H. S.).
Stett. Ent. Ztg. XXIV 150 : type *fumosa*, Zeller [Venezuela].

Gel. TRICHOTAPHE, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 166 : type *setosella*, Clemens. [N. America].
|| Begoe, Chambers 1872.
|| Malacotricha, Zeller 1873.

Schreck. TRICHOTHYRSA, Meyrick 1912.
Exot. Micr. I 61 : type *flammivola*, M. [S. India].

Oec. TRICLONELLA, Busck 1901.
Jl. N. Y. Ent. Soc. VIII 236, t. 9 f. 2 : type *pergandeella*, Busck. [N. E. United States].

Gel. TRICYANAULA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 131 : type *aurantiaca*, Wlsm. [India.]

Stigm. TRIFURCULA, Zeller 1848.
Linn. Ent. III 330-331, t. 2 ff. 51-52 : type *pallidella*, Zeller [Europe].
Trifurcella, Chambers, Index to Tin., p. 165 (*lapsus*).

Oec. TRIGONOPHYLLA, Turner 1919.
Proc. R. Soc. Queensl. XXXI 170 : type *tarachodes*, Turner. [Queensland].

Aeg. TRILOCHANA, Moore 1879.
Lep. Atk., p. 9 : type *scolioides*, Moore [Sikkim].
|| Scoliomima, Butler 1885.

Tripanisma, Chambers (See TRYPANISMA).

Triptodema, Forbes (See TRYPTODEMA).

Oec. TRIPTOLOGA, Meyrick 1914.
Exot. Micr. I 257 : type *coniopis*, M. [India].

Orn. TRISCAEDECIA, Hampson 1905.
T. E. S. 1905. 247, fig. : type *dactyloptera*, Hmp. [S. India ; Ceylon].
|| Hofmannia, Pagenstecher 1900 (*praeocc.*).

Ypon. TRISOPHISTA, Meyrick 1924.
Exot. Micr. III 117-118 : type *doctissima*, M. [Congo ; Uganda].

Tin. TRISSOCHYTA, Meyrick 1921.
Exot. Micr. II 474 : type *acraspis*, M. [N. India].

Cosm. TRISSODORIS, Meyrick 1914.
B. J. XXII 775 : type *honorariella*, Wlsm. [Hawaii ; Ceylon].

Tin. Trisyntopa, Lower 1918. (SETOMORPHA, Zeller).
Tr. R. Soc. S. Austr. XLII 238 : type [*rutella*, Zeller =] *euryspoda* Lower. [Tropics and Subtropics].

Gel. TRITADELPHA, Meyrick 1904.
P. Linn. Soc. N. S. W. XXIX 323 : type *microptila*, M. [Queensland].

Tin. TRITHAMNORA, Meyrick 1913.
Tr. N. Z. Inst. XLV 29 : type [*certella*, Wlk.=] *improba*, M [New Zealand].
|| Lipomerinx, Wlsm. 1914.

Eucosm. TRITOPTERNA, Meyrick 1921.
Zool. Meded. VI 151-152 : type *chionostoma*, M. [Java].

Ypon. TROCHASTICA, Meyrick 1913.
Ann. Transv. Mus. III 321 : type *albifrenis*, M. [Transvaal].

Aeg. Trochilia, Heinemann 1859. (SYNANTHEDON, Hb.).
Schmett. Deuts. I 120 : type ... (?)
[*Note.* Description not available; perhaps synonym of *Conopia.*]

Aeg. Trochilina, Hampson 1919. (MONOPETALOTAXIS, Wlgn.).
Novit. Zool. XXVI 58 : type *candescens*, Felder. [S. Africa].
Trochilina, Felder, Reise Novara, p. 9, t. 82 f. 23 (1874) (*non descr.*).

Aeg. Trochilium, Oken 1815. (AEGERIA, Fb.).
Lehrbuch III. i. 748 : type *apiformis*, Linn. (Europe ; N. America)
nec *Trochilium*, Scopoli, Intr. Hist. Nat., p. 414 (1777) [Invalid ; no associated species].

Tin. Trophimaea, Meyrick 1910. (EUMASIA, Chrétien).
Rec. Ind. Mus. V 232 : type *arenatella*, Wlk. [India ; Ceylon ; China].

Eucosm. Trycheris, Barrett 1907. (ENARMONIA, Hb.).
Brit. Lep. XI 246 : type *aurana* Fb. [Europe].
Trycheris, Guen., Ann. S. E. Fr. (2) III 190 (1845) (*non-descr.*).

Oec. TRYCHERODES, Meyrick 1914.
Exot. Micr. I 252 : type *albifrons*, Wlsm. [C. America].
|| Teratomorpha, Wlsm. 1912 (*praeocc.*).

Ypon. TRYCHONOMERA, Turner 1913.
P. Linn. Soc. N. S. W. XXXVIII 199 : type *anthemis*, Turner. [Queensland].

Tortr. TRYCHNOPHYLLA, Turner 1926.
Tr. R. Soc. S. Austr. L 137 : type *taractica*, Turner. [Queensland].

Coprom. Trychnostola, Turner 1916. (COPROMORPHA, Meyr.).
Tr. R. Soc. S. Austr. XL 502 : type *lichenitis*, Turner [Queensland].

Chlid. TRYMALITIS, Meyrick 1905.
B. J. XVI 590 : type *margarias*, M. [Ceylon].

Gel. TRYPANISMA, Clemens 1860.
Proc. Acad. Nat. Sci. Philad. XII 168 : type *prudens*, Clemens [U. S. America].
Tripanisma, Chambers, Index to Tineina, p. 166 (*lapsus*).

Crypt. TRYPHERANTIS, Meyrick 1907.
B. J. XVII 740 : type *atelogramma*, M. [Sikkim].

Tin. Tryptodema, Dietz 1905. (TINEA, Linn.).
Tr. Am. E. S. XXXI 74, t. 6 f. 2 : type *sepulchrella*, Dietz [Maryland].
Triptodema, Forbes, Lep. N. York, p. 138 (1924) (*emend.*).

Oec. Tubulifera, Spuler 1910 (*praeocc.*). (BORKHAUSENIA, Hb.).
Schmett. Eur. II 347 : type *flavifrontella*, Hb. [Europe to N. Persia].

Oec. Tubuliferola, Strand 1917. (BORKHAUSENIA, Hb.).
Intern. Entom. Zeits. X 137 : type *flavifrontella*, Hb [Europe to N. Persia].

Gel. Tuta, Strand 1910. (GNORIMOSCHEMA, Busck).
Berl. Ent. Zeit. LV 169, ff. 4-6 : type *atriplicella*, Strand. [Argentina].

Tortr. TYMBARCHA, Meyrick 1908.
B. J. XVIII 622 : type *cerinopa*, M. [India].

Crypt. Tymbophora, Meyrick 1890. (PHTHONERODES, Meyr.).
Tr. R. Soc. S. Austr. XIII 56 : type *peltastis*, M. [Australia].

Tin. TYPHOGENES, Meyrick 1919.
Exot. Micr. II 256 : type *psapharota*, M. [S. India].

Tin. Typhonia, Boisduval 1840. (MELASINA, Bdv.).
Genera et Index Method., p. 78 : type *lugubris*, Hb. [Europe].

Aeg. TYRICTACA, Walker 1862.
Jl. Linn. Soc. (Zool.) VI 83-84 : type *apicalis*, Wlk. [Borneo].

Glyph. TYRIOMORPHA, Meyrick 1918.
Exot. Micr. II 191 : type *phoenissa*, Butler [Chile].

Oec. TYROMANTIS, Meyrick 1918.
Exot. Micr. II 217 : type *metaxantha*, M. [Madagascar].

U

Adel. Ucetia, Walker 1866. (NEMOPHORA, Hofm.).
Cat. XXXV 1820 : type *bifasciella*, Wlk. [Java].

Gel. Uipsa, Walker 1864. (TIMYRA, Wlk.).
Cat. XXIX 828 : type [*phycisella*, Wlk.=] *perionella* Wlk. [Ceylon].

Gel. ULIARIA, Dumont 1920.
Bull. S. E. Fr. 1920. 329 : type *insulella*, Dumont. [France].

Cosm. ULOCHORA, Meyrick 1920.
Exot. Micr. II 318-319 : type *strepsosema*, M. [Fiji].

Lyon. ULOCORYS, Meyrick 1915.
Exot. Micr. I 356 : type *antiloga*, M. [Queensland].

Tortr. ULODEMIS, Meyrick 1907.
B. J. XVII 736 : type *trigrapha*, M. [India].

Adel. ULOMETRA, Meyrick 1912.
Exot. Micr. I 27 : type *indigna*, M. [Transvaal].

Gel. UNTOMIA, Busck 1906.
Proc. U. S. Nat. Mus. XXX 727, f. 5 : type *untomiella*, Busck. [Texas].

[Nolidae. Uraba, Walker 1863. (ROESELIA, Hb.).
Cat. XXVIII 448-449 : type *lugens*, Wlk. [Tasmania]].

Cosm. URANGELA, Busck 1912.
Smiths. Misc. Coll. LIX, Pub. 2079, p. 2 ; type *pygmaea*, Busck. [Panama].

Tin. Urbara, Walker 1864. (ACROLOPHUS, Poey).
Cat. XXIX 835 : type *galeata*, Wlk. [Brazil].

Lyon. URODETA, Stainton 1869.
Tin. S. Europe, p. 226 : type *cisticolella*, Stainton. [S. France].
Urodela, Stt., *l.c.* [error typogr. ; corrected in " Errata "].

Ypon. URODUS, Herrich-Schäffer 1854.
Aussereur. Schmett. I, 7 Anm., p. 11 : type *monura*, H. S. [C. & S. America].
|| Trichostibas, Zeller 1863.
|| Paratiquadra, Wlsm. 1897.

Aluc. Uroloba, Walsingham 1891. (UTUCA, Wlk.).
E. M. M. XXVII 261 : type *fuscicostata*, Wlsm. [Chile].

Glyph. USSARA, Walker 1864.
Cat. XXIX 800-801 : type *decoratella*, Wlk. [Brazil].
|| Trapeziophora, Wlsm. 1892.

Aluc. UTUCA, Walker 1864.
Cat. XXX 951 : type *ochracealis*, Wlk. [C. & S. America].
|| Uroloba, Wlsm. 1891.

[? UZEDA, Walker 1863.
Cat. XXVIII 442 : type *vitriferana*, Wlk. [Brazil].
Note. Not a Micro.].

Crypt. UZUCHA, Walker 1864.
Cat. XXIX 826 : type *humeralis*, Wlk. [N. S. Wales]
|| Gonioma, Turner 1897.

V

Blast. Valentinia, Walsingham 1907. (AUXIMOBASIS, Wlsm.).
Proc. U. S. Nat. Mus. XXXIII 200-201 : type *glandulella*, Riley. [N. America].

Incurv. Valentinia, Coolidge 1909 (*praeocc.*). (TEGETICULA, Zeller).
Entl. News XX 112: type *yuccasella*, Riley. [Southern U. S. America].

Schreck. VANICELA, Walker 1864.
Cat. XXX 1039: type *disjunctella*, Wlk. [New Zealand].

Gel. VAZUGADA, Walker 1864.
Cat. XXIX 803: type [*abscessella*, Wlk.=] *strigiplenella*, Wlk. [Brazil].

Aeg. Veismannia, Hampson 1919. (See Weismannia).

Oec. Venilia, Chambers 1872 (*praeocc.*). (EIDO, Chambers).
Canad. Ent. IV 207: type *albapalpella*, Chambers. [U. S. America].

Tin. Ventia, Walker 1866. (TIQUADRA, Wlk.).
Cat. XXXV 1838-1839: type *reversella*, Wlk. [Brazil].

Aeg. Vespaegeria, Strand 1913. (SIMILIPEPSIS, Le Cerf.).
Arch. Nat. LXVIII, A 12, p. 70: type *typica*, Strand [W. & E. Africa].

Aeg. Vespamima, Beutenmuller 1894. (CONOPIA, Hb.).
Bull. Amer. Mus. N. H. VI 87: type *sequoiae*, H.-Edw. [California].

Aeg. VESPANTHEDON, Le Cerf 1917.
Obth., Et. Lep. Comp. XIV 329: type *cerceris*, Le Cerf. [Mozambique].

Glyph. Vinzela, Walker 1865. (IMMA, Wlk.).
Cat. XXXIV 1260: type *inaptalis*, Wlk. [Borneo to Perak].

[Galleriadae. Vobrix, Walker 1864. (ACHROIA).
Cat. XXX 1014: type *innotata*, Wlk. [Borneo]].

Oec. Volucră, Latreille 1829. (DEPRESSARIA, Hw.).
Cuv. Règne Anim. (2e edit.) V 412: type *heracleana*, Fb. [Europe].

W

Cosm. Walshia, Clemens 1864. (MOMPHA, Hb.).
Proc. E. S. Philad. II 418-419: type *amorphella*, Clemens [Atlantic States].

Glyph. Walsinghamia, Riley 1889. (TORTYRA, Wlk.).
Proc. E. S. Wash. I 157: type *diva*, Riley. [N. America].

Aluc. WALSINGHAMIELLA, Berg 1898.
Comm. Mus. Buenos Aires II 42: type *eques*, Wlsm. [W. Africa].
‖ Gilbertia, Wlsm. 1891 (*praeocc.*).

Aeg. WEISMANNIA, Spuler 1910.
Schmett. Eur. II 317 : type *agdistiformis*, Stdgr. [Sarepta].
Veismannia, Hampson, Novit. Zool. XXVI 51 (1919). (*emend.*)

Aluc. Wheeleria, Tutt (*non-descr.*). (ALUCITA, Linn.).
Ent. Rec. XVII 37 : type *spilodactyla*, Curtis. [Europe].

Cosm. Wilsonia, Clemens 1864. (MOMPHA, Hb.).
Proc. E. S. Philad. II 428-429 : type *brevivittella*, Clemens. [N. America].

Oec. WINGIA, Walsingham 1900.
Cat. Het. Mus. Oxon. II 552 : type *lambertella*, Wing. [Australia].
|| Palparia, Wing 1849 (*praeocc.*).

Ypon. WOCKIA, Heinemann 1870.
Kleinschmett. Deuts. II i. 102-103 : type [*aspcripunctella*, Bruand =] *funebrella*, Hein. [Europe].
Wockeia, Spuler, Schmett. Eur. II 443 (1910) (*emend.*).

? WOORDA, Lucas 1901.
P. Soc. Queensl. XVI 93 : type *aquosa*, Lucas. [Queensland].
Note. Description not available.

? WULLABURRA, Lucas 1901.
P. Soc. Queensl. XVI 94 : type *nigromedia* Lucas. [Queensland].
Note. Description not available.

X

Phal. Xanthosetia, Stephens 1834. (EUXANTHIS, Hb.).
Ill. Brit. Ent., Haust. IV 190-191 : type *hamana*, Linn. [Europe].
Xanthosetia, Steph., Cat. Brit. Ins. II 192 (1829) (*non-descr.*).

Lith. Xanthospilapteryx, Spuler 1910. (CALOPTILIA, Hb.).
Schmett. Eur. II 407 : type *syringella*, Fb. [Europe].

Xenodochium. (See Zenodochium).

Gel. Xenolechia, Meyrick 1895. (TELPHUSA, Chambers).
Handb., p. 583 : type *aethiops*, Westwood (Europe).

Oec. XENOMICTA, Meyrick 1914.
Exot. Micr. I 248 : type *cupreifera*, Butler [Japan].

Blast. XENOPATHIA, Rebel 1902.
Verh. Z.-b. Wien LII 571 : type *novaki*, Rebel. [Dalmatia].
Xenopathia, Rebel, Cat. Lep. Pal. II 164 (1901) (*non-descr.*).

Metachand. XENOPHANTA, Meyrick 1914.
Ann. Transv. Mus. IV 194 : type *ecliptis*, M. [Comoro Isds.].

Gel. XENORRHYTHMA, Meyrick 1926.
Sarawak Mus. Jl. III 154 : type *traumatias*, M. [Borneo].

Tortr. XENOTHICTIS, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 279-280 : type *paragona*, M. [Lifu Isds.].

Crypt. XEROCRATES, Meyrick 1917.
Exot. Micr. II 54 : type *proleuca*, M. [S. Australia].

Gel. XEROMETRA, Meyrick 1926.
Wyts. Gen. Ins., fasc. 184, p. 170 : type *crocina*, M. [S. E. Australia].

Schreck. XESTOCASIS, Meyrick 1914.
Entom. Mitteil., Suppl. III, p. 54 : type *iostrota*, M. [Borneo ; India].

Tin. XYLESTHIA, Clemens 1859.
Proc. Acad. Nat. Sci. Philad. XI 259, 262 : type *pruniramiella*, Clemens. [N. & C. America].
Xylestia, Dyar. List N. Am. Lep., p. 569 (1903) [*lapsus*].
|| Phyciodyta, Meyr. 1918.

Crypt. XYLODRYAS, Meyrick 1925.
Exot. Micr. III 151 : type *cryeranthes*, M. [New Guinea].

Crypt. XYLOMIMETES, Turner 1916.
P. Linn. Soc. N. S. W. XLI 256 : type *trachyptera*, Turner. [Queensland].

Glyph. Xylopoda, Latreille 1829. (ANTHOPHILA, Hw.).
Cuv. Règne Anim. (2e ed.) V 412 : type *fabriciana*, Linn. [Europe].

Crypt. Xylorycta, Meyrick 1890. (PHTHONERODES, Meyr.).
Tr. R. Soc. S. Austr. XIII 57 : type *luteotactella*, Wlk. [E. Australia].

Tin. XYLOSCOPA, Meyrick 1920.
Exot. Micr. II 353-354 : type *heterocrossa*, M. [India].

Aluc. XYROPTILA, Meyrick 1908.
T. E. S. 1907. 479 : type *oenophanes*, M. [W. India].

Ypon. Xyrosaris, Meyrick 1907. (ZELLERIA, Stt.).
P. Linn. Soc. N. S. W. XXXII 71 : type *dryopa*, M. [E. Australia].

Tin. Xysmatodoma, Zeller 1852. (NARYCIA, Stephens).
Linn. Ent. VII 332, 362-363 : type [*monilifera*, Geoffr.=] *melanella*, Hw. [Europe].

Oec. XYSTOCEROS, Meyrick 1914.
Exot. Micr. I 253 : type *tripleura*, M. [Baluchistan].

Gel. Xystophora, Heinemann 1876. (ARISTOTELIA, Hb.).
Kleinschmett. Deuts. II. ii, Tab. p. 6: type *pulveratella*, H. S. [Europe].

Tin. Xystrologa, Meyrick 1919. (HOMOSTINEA, Dietz).
Exot. Micr. II 271: type *invidiosa*, M. [Colombia].

Y

Ypon. YPONOMEUTA, Latreille 1802.
H. N. Crust. Ins. III 417-418: type *evonymella*, Linn. [Europe].
Yponomeuta, Latr. Précis caract. gen., p. 146 (1796) [Invalid; no associated species].
Hyponomeuta, Sodoffsky, Bull. Mosc. X, No. 6, p. 94 (1837) (*emend*)
|| Hyphantes, Hb. (*non-descr.*) 1806.
|| Erminea, Hw. 1811.
|| Nygmia, Hb. 1826.
|| Teinoptila, Sauber 1902.

Plut. YPSOLOPHUS, Fabricius 1798.
Ent. Syst. Suppl. pp. 421, 505: type *vittella*, Linn. [Europe].
|| Cerostoma. Latreille 1802.
|| Theristis, Hb. 1826.
|| Harpipterix, Hb. 1826.
|| Hypsolopha, Hb. 1826.
|| Abebaca, Hb. 1826.
|| Chaetochilus, Stephens 1835.
|| Hypolepia, Gn. 1845 (*non-descr.*).
|| Pteroxia, Gn. 1845 (*non-descr*).
|| Credemnon, Wlgn. 1880.
|| Periclymenobius, Wlgn. 1880.
|| Trachoma, Wlgn. 1880.
|| Plutelloptera, Chambers 1880.
|| Mapa, Strand 1911.

[*Note.*—The Gelechiad genus, *Ypsolophus*, auct. (nec Fb.), is *Dichomeris*, Hb.].

Z

Tortr. ZACORISCA, Meyrick 1910.
P. Linn. Soc. N. S. W. XXXV 220: type *holantha*, M. [New Guinea].
|| Megalodoris, Meyr. 1912.

Oec. ZACORUS, Butler 1882.
A. M. N. H. (5) IX 102 : type *carus*, Butler [S. E. Australia ; Tasmania].
|| Philonympha, Meyr. 1884.

Gel. ZALITHIA, Meyrick 1894.
T. E. S. 1894. 18 : type *uranopis*, M. [Burma].

Cosm. ZANCLARCHES, Meyrick 1921.
Zool. Meded. VI 169 : type *fastosa*, M. [Java].

Crypt. ZANCLOPHORA, Turner 1900.
Tr. R. Soc. S. Austr. XXIV 8. [*Zauclophora*—error typogr.) : type *pelodes*, Turner. [Queensland].

Tin. ZANCLOPSEUSTIS, Meyrick 1921.
Zool. Meded. VI 196-197 : type *mucronata*, M. [Java].

Oec. ZAPHANAULA, Meyrick 1920.
Exot. Micr. II 312-313 : type *xenophila*, M. [Queensland].

Schreck. ZAPYRASTRA, Meyrick 1889.
Tr. N. Z. Inst. XXI 171-172 : type *calliphana*, M. [New Zealand].

Schreck. ZARATHA, Walker 1864.
Cat. XXIX 789-790 : type *pterodactylella*, Wlk. [Brazil].

Ypon. ZARCINIA, Chrétien 1915.
Ann. S. E. Fr. LXXXIV 310, f. 1 : type *nigrosignatella*, Chrét. [Tunis].

Oec. ZATRICHODES, Meyrick 1914.
Exot. Micr. I 247 : type *thyrsota*, M. [Ceylon].

Eucosm. Zeiraphera, Curtis 1838. (EUCOSMA, Hb.).
Brit. Entom. XV, expl. t. 711 : type [*corticana*, Hb.=] *communana*, Curtis. [Europe].
Zeiraphera, Treits., Schmett. Eur. VII 331 (1829) (*non-descr.*).

Ypon. ZELLERIA, Stainton 1849.
Cat. Brit. Tin. Pteroph., p. 22 : type *hepariella*, Stt. [C. & S. Europe ; Asia Minor].
|| Kessleria, Nowicki 1864.
|| Paradoxus, Stainton 1869.
|| Hofmannia, Wocke 1876.
|| Circostola, Meyr. 1889.
|| Xyrosaris, Meyr. 1907.
|| Lycophantis, Meyr. 1914.

Tin. ZELOMORA, Meyrick 1915.
Exot. Micr. I 292-293 : type *rhacota*, M. [Nyasaland].

Gel. ZELOSYNE, Walsingham 1911.
Biol. Centr. Am., Het. IV 51, f. 13 : type *poecilosoma*, Wlsm. [Panama].

Oec. ZELOTECHNA, Meyrick 1914.
Exot. Micr. I 222 : type *falcifera*, M. [Australia].

Tortr. ZELOTHERSES, Lederer 1859.
Wien. Ent. Mon. III 250 : type *albociliana*, H. S. [S. E. Russia].

Blast. Zenodochium, Walsingham 1908. (BLASTOBASIS, Zeller).
E. M. M. XLIV 52-53 : type *monopetali*, Wlsm.
Xenodochium, Durrant M. S. (*emend.*).

Aeg. ZENODOXUS, Grote and Robinson 1868.
Tr. Am. E. S. II 183 : type *maculipes*, Grote. [N. America].
|| Paranthrenopsis, Le Cerf 1911.
|| Myrmecosphecia, Le Cerf 1917.

Tin. ZESTICODES, Meyrick 1918.
Ann. Transv. Mus. VI 46 : type *cyanoscia*, M. [Natal].

Crypt. Zetesima, Walsingham 1912. (STENOMA, Zeller).
Biol. Centr. Am., Het. IV 157 : type *lasia*, Wlsm. [Panama].

Oec. Zirosaris, Meyrick 1910. (IZATHA, Wlk.).
Tr. N. Z. Inst. XLII 65-66 : type *amorbas*, M. [New Zealand].

Crypt. Zitua, Walker 1866. (CRYPTOPHASA, McLeay).
Cat. XXXV 1841 : type *balteata*, Wlk. [Australia].

Gel. ZIZYPHIA, Chrétien 1908.
Bull. S. E. Fr. 1908. 166 : type *cleodorella*, Chrét. [Algeria].

Eucosm. Zomaria, Heinrich 1926. (ARGYROPLOCE, Hb.).
U. S. Nat. Mus. Bull. 132, pp. 111-112, ff. 59, 199 : type *interruptolineana*, Fernald [N. America].

Gel. ZOMEUTIS, Meyrick 1913.
B. J. XXII 182 : type *dicausta*, M. [Assam].

Tin. ZONOCHARES, Meyrick 1922.
Exot. Micr. II 596 : type *tetradyas*, M. [Brazil].

Oec. ZONOPETALA, Meyrick 1883.
P. Linn. Soc. N. S. W. VII 459-460 : type *clerota*, M. [E. Australia].

Amphith. Zonops, Turner 1900. (AMPHITHERA, Meyr.).
Tr. R. Soc. S. Austr. XXIV 17 : type *heteroleuca*, Turner. [Queensland].

Ypon. ZYGOGRAPHA, Meyrick 1917.
Ann. S. Afr. Mus. XVII 11-12: type *asaphochalca*, M. [Cape Colony].

Oec. ZYGOLOPHA, Meyrick 1914.
Exot. Micr. I 242: type *praenigrata*, M. [India ; Ceylon].

Tin. ZYMOLOGA, Meyrick 1919.
Exot. Micr. II 275: type *mylicopa*, M. [Colombia].

ADDENDA

Tin. AEONOXENA, Meyrick 1928.
Exot. Micr. III 431-432 : type *palaeographa*, M. [Tanganyika].

Ypon. AGRIOCEROS, Meyrick 1928.
Exot. Micr. III 417-418 : type *platycypha*, M. [Philippines].

Adel. Alucita, Fabricius 1775 (nec Linn. 1758). (NEMOPHORA, Hofm. 1798).
Syst. Ent., p. 667 : type *degeerella*, Linn. [Europe].

Cosm. ASYMPHORODES, Meyrick 1929.
T. E. S. LXXVI 498 : type *valligera*, M. [Marquesas].

Tin. Autochthonus, Walsingham 1891. (HAPSIFERA, Zeller).
T. E. S. 1891, 82, t. 7 f. 4 : type *chalybiellus*, Wlsm. [Gambia].

Oec. CALLIPHRACTIS, Meyrick 1928.
Exot. Micr. III 476 : type *phyllograpta*, M. [Sierra Leone].

Gel. COPTICOSTOLA, Meyrick 1929.
T. E. S. LXXVI 508 : type *acuminata*, Wlsm. [Colombia ; Mexico].

? DICRANOSES, Kieffer 1910.
Centralbl. f. Bakt., II Abt., XXVII 385-386, f. 16 : type *capsulifex* Kieffer. [Argentina].

Tin. EMPHANTICA, Meyrick 1928.
Exot. Micr. III 430 : type *coniographa*, M. [Natal].

Tin. EPISYRTA, Meyrick 1929.
T. E. S. LXXVI 520 : type *coniomicta*, M. [Colombia].

Tortr. HYDARANTHES, Meyrick 1928.
Exot. Micr. III 460 : type *deltographa*, M. [New Britain].

Tin. LIOPSEUSTIS, Meyrick 1928.
Exot. Micr. III 429 : type *planicola*, M. [Natal].

Cosm. MICROZESTIS, Meyrick 1929.
T. E. S. LXXVI 501 : type *inelegans*, M. [Marquesas].

Tin. NESOXENA, Meyrick 1929.
T. E. S. LXXVI 506-507 : type *strangulata*, M. [Paumotus].

Tin. OMICHLOSPORA, Meyrick 1928.
Bull. Hill Mus. II 239 : type *incertula*, M. [Marocco].

Cosm. PANCLINTIS, Meyrick 1929.
T. E. S. LXXVI 511-512 : type *socia*, M. [Colombia].

Ypon. PHASMATOGRAPHA, Meyrick 1928.
Exot. Micr. III 418-419 : type *neurotypa*, M. [Siam].

Cosm. Pogonias.
The generic name *Pogonias* was used by Lower (*Tr. R. Soc. S. Austr.* XVII (1893) and XVIII (1894)) for several species now mostly placed in *Trachydora*, M. I cannot trace that *Pogonias* was ever described as a Lepidopterous genus and, in any case, it is praeoccupied by (1) *Pogonias*, Lacépede 1800 (PISCES) and (2) *Pogonias*, Ill. 1811 (AVES).

Tortr. POLYDRACHMA, Meyrick 1928.
Exot. Micr. III 461 : type *aleatoria*, M. [New Ireland].

Eucosm. RAUMATIA, Philpott 1928.
Tr. N. Z. Inst. LIX 487-488 : type *potamias*, M. [New Zealand].

Oec. SECITIS, Meyrick 1928.
Exot. Micr. III 472 : type *grata*, M. [Cochin-China].

Gel. STIBAROMACHA, Meyrick 1928.
Bull. Hill Mus. II 235 : type *ratella*, H. S. [S. Europe ; N. Africa ; Asia Minor].

Aeg. THAMNOSCELIS, Meyrick 1928.
Exot. Micr. III 466 : type *inclemens*, M. [Siam].

Crypt. THYRSOMNESTIS, Meyrick 1929.
T. E. S. LXXVI 514 : type *ceramoxantha*, M. [Colombia].

Tin. XEROCAUSTA, Meyrick 1929.
T. E. S. LXXVI 521 : type *ceramochra*, M. [Colombia].

MGIPC—M—III-1-122—25-6-29—600.

FURTHER ADDENDA AND CORRIGENDA.

The following names have come to notice after final correction of proofs :-

Gel. AGATHACTIS, Meyr. 1929

Exot. Micr. III 501 : type *toxocosma*, *M*. (Brit. Guiana)

Gel. AROTROMIMA, Meyr. 1929

Exot. Micr. III 532 : type *politica*, *M*. (Brit. Guiana)

Gel. BUCOLARCHA, Meyr. 1929

Exot. Micr. III 515 : type *geodes*, *M*. (India ; Natal)

Schreck. CAMINEUTIS, Meyr. 1929

Exot. Micr. III 544 ; type *xanthocausta*, *M*. (Cameroons)

Gel. CHALCOMIMA, Meyr. 1929

Exot. Micr. III 507 : type *hoplodoxa*, *M*. (Peru)

Gel. COLPOMORPHA, Meyr. 1929

Exot. Micr III 528 : type *orthomeris*, *M*. (Assam)

Oec. Depressariodes, Turati 1924 (DEPRESSARIA, Hw).

Atti. Soc. Sci. Nat. Milano LXIII 175, f. 7: type *marmaricellus*, Turati. (Cyrenaica)

Orn. HEBDOMACTIS, Meyr. 1929

Exot. Micr. III 539 : type *crystallodes*, *M*. (New Guinea)

Schreck. HECATOMPEDA, Meyr. 1929

Exot. Micr. III 543 : type *pyrocephala*, *M*. (Solomons)

Gel. HETERODERCES, Meyr. 1929

Exot. Micr. III 521 : type *oxylitha*, *M*. (Assam)

Orn. HEXERETMIS, Meyr. 1929

Exot. Micr. III 539–540 : type *argo*, *M*. (Peru)

Gel. HYPOCHASMIA, Meyr. 1929

Exot. Micr. III 517 : type *cirrhocrena* *M.* (S. India)

Gel. LEUCOGONIA, Meyr. 1929

Exot. Micr. III 504 : type *subsimella*, Clem. (U. S. America)

Ypon. MAUGINIA, Turati 1924

Atti. Soc. Nat. Milano LXIII 158 : type *kruegeri*, Turati.(Cyrenaica)

Gel. Microlechia, Turati 1924 (RECURVARIA, Hw).

Atti. Soc. Sci Nat. Milano LXIII 162 - 163 ,f. 6 : type *chretieni*, Turati (Cyrenaica)

Oec. Minopictes, Turati 1924 (BORKHAUSENIA, Hb.)

Atti Soc. Sci. Nat. Milano LXIII 176 - 177 : type *aristippella*, Turati (Cyrenaica)

Gel. PROADAMAS, Meyr. 1929

Exot. Micr III 527 : type *indefessa*, *M.* (Ceylon)

Lith. PROTOLITHOCOLLETIS, Braun 1924

Canad. Ent. LXI. 38 : type *lathyri*, Braun (Canada)

Gel. SYNCRATOMORPHA, Meyr. 1929

Exot. Micr. III 509 : type *euthetodes*, *M.* (Andamans)

Gel. Syngenomictis, Meyr. 1927 SITOTROGA, Hein).

Ins. Somoa III 78 : type *acmctopa*, *M.* (Samoa ; India)

Gel. TOXOTACMA, Meyr. 1929

Exot. Micr. III 504 : type *meditans*. *M.* (Assam)

Gel. TRACHYEDRA, Meyr. 1929

Exot. Micr. III 497-498 : type *xylomorpha*, *M.* (Kanara)

Gel. TRICHOBOSCIS, Meyr. 1929

Exot. Micr. III 526 . type *pansarista*, *M.* (Sikkim)

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